KING'S College LONDON

SOCIAL CARE WORKFORCE RESEARCH UNIT

Longitudinal Analysis of the National Minimum Data Set for Social Care (NMDS-SC)

Analysis Report 1:

Longitudinal Changes in Care Worker Turnover and Vacancy Rates and Reasons for Job Leaving in England (2008-2010)

Shereen Hussein, BSc MSc PhD

Jill Manthorpe, MA

November 2011

ISBN: 978-0-9560268-2-8

Acknowledgments and disclaimer

The authors are most grateful to Skills for Care for providing the NMDS-SC data files. Special thanks go to colleagues at Skills for Care, Paul Buchanan, David Griffiths and Sarah Woodrow, for their continued support. The longitudinal analysis of the National Minimum Data Set for Social Care (NMDS-SC) is funded by the Department of Health, Policy Research Programme, core fund for the Social Care Workforce Research Unit at King's College London. The views expressed in this report are those of the authors alone and not necessarily those of the Department of Health, or Skills for Care.

Table of Content

Acknowledgments and disclaimer 2
Executive Summary 6
Methods 13
Providers' panel sample 17
Panel sample description and representativeness 18
Data quality checks 20
Findings 21
Care worker turnover rates 2008 to 2010 21
Regional variations in care worker turnover 22
Organisational factors and turnover rate 22
Sector 23
Organisation size 24
Type of setting 26
Changes in care worker turnover rates 2008 to 2010 26
Care worker vacancy rates 2008 to 2010 30
Regional variations in care worker vacancy rates 30
Organisational factors and care worker vacancy rates 31
Sector 31
Organisation size 32
Type of setting 33
Changes in care worker vacancy rates 2008 to 2010 34
Changes in perceived reasons for leaving 37
Providers with no change in care worker turnover from T1 to T2 39
Providers experiencing increases in care worker turnover from T1 to T2 39
Providers experiencing decline in care worker turnover from T1 to T2 40
Discussion and Conclusion 42
References 46

List of Tables

Table 1 Distribution of panel sample of providers by sector compared to that of NMDS-SC overall returns in March and June 2008 19
Table 2 Distribution of panel sample of providers by organisation sector compared to that of NMDS-SC overall returns in March and June 2008 19
Table 3 Distribution of panel sample of providers by region compared to that of NMDS-SC overall returns in March and June 2008 20
Table 4 Care worker mean turnover rates at T1 and T2 by region 22
Table 5 Care worker mean turnover rates at T1 and T2 by sector 23
Table 6 Care worker mean turnover rates at T1 and T2 by organisation size 25
Table 7 Care worker mean turnover rates at T1 and T2 by type of care settings 26
Table 8 Changes in care worker turnover rate statistics for all panel providers and the two groups experiencing increases and decreases in turnover rate from T1 to T2 27
Table 9 Distributions of providers with different changes in care worker turnover rates from T1 to T2 by key organisational characteristics 29
Table 10 Care worker mean vacancy rates at T1 and T2 by region 30
Table 11 Care worker mean vacancy rates at T1 and T2 by sector 31
Table 12 Care worker mean vacancy rates at T1 and T2 by organisation size 33
Table 13 Care worker mean vacancy rates at T1 and T2 by type of care settings 34
Table 14 Changes in care worker vacancy rate statistics for all panel providers and the two groups experiencing increases and decreases in care worker vacancy rates from T1 to T2 34
Table 15 Distributions of providers with different changes in care worker vacancy rates from January 2008 to January 2010 by key organisational characteristics 36
Table 16 Perceived reasons for leaving jobs among providers experiencing NO CHANGE in care worker turnover rates at T1 and T2 and significance of change 39
Table 17 Perceived reasons for leaving jobs among providers experiencing INCREASES in care worker turnover rates at T1 and T2 and significance of change 40
Table 18 Perceived reasons for leaving jobs among providers experiencing DECLINE in care worker turnover rates at T1 and T2 and significance of change 41

List of Figures

Figure 1 Visualisation of longitudinal records of providers with 17 updated events during the period December 2007 and March 2011 15
Figure 2 Density distribution plot of providers with at least 2 updates during the period December 2007 to March 2011..... 16
Figure 3 density distributions of number of days elapsed between two updated providers' events..... 16
Figure 4 Distribution of number of days convergence from midpoints at T1 and T2 and distribution of number of days elapsed from T1 and T2 for the providers' panel sample..... 18
Figure 5 Care workers turnover rate distributions at T1 and T2 by sector..... 24
Figure 6 Care worker turnover rate distributions at T1 and T2 by organisation size..... 25
Figure 7 Scatter plot of providers with negative and positive changes in care worker turnover rate from T1 to T2..... 28
Figure 8 Mean and confidence intervals of care worker vacancy rate at T1 and T2 by sector..... 32
Figure 9 Mean and confidence intervals of care worker vacancy rate at T1 and T2 by organisation size 33
Figure 10 Scatter plot of providers with negative and positive changes in care worker vacancy rate from T1 to T2..... 35

Executive Summary

It is frequently observed that changing demographics and an ageing population are increasing the demand for social care while traditional pools of social care staff are becoming less available. The consequences of turnover and vacancies among care workers, whether in care homes or home care, are extensive. They range from increased costs, particularly because 80 to 85 percent of social care budget is spent on workforce costs, perceived lower quality of care, and negative impacts on job satisfaction and staff mental and general health. The economic costs alone of high turnover and vacancy rate are considerable if training, loss of skills and experience, and recruitment and induction costs are taken into account. Organisational characteristics appear to be key in maintaining both vacancy and turnover rates at a reasonable level. Level of pay, working conditions, recruitment strategies and management styles are important elements in job satisfaction and intention to leave among frontline staff.

The availability of data through the NMDS-SC provides an opportunity to gain further workforce intelligence about how turnover and vacancy rates are changing. This is because the NMDS-SC contains longitudinal data about a sizeable sample of organisations and allows the investigation of changes over time among this particular group. Taking a follow up approach offers potentially more accurate estimates of changes in turnover and vacancy rates and enables the identification of any different organisational characteristics, which are linked to reductions in these elements over time. Longitudinal data differ greatly from the collection of repeated cross-sectional data. With cross-sectional data, the calculated measures are representative of the population at a single period in time and information about the temporal aspects of a specific individual's changes is not necessarily available. Unlike cross-sectional studies, longitudinal studies track the same individual providers over time making information about changes more accurate as they have eliminated the effect of the sample composition and the averaging effect associated with repeated samples.

The current report focuses on understanding changes in direct care workers turnover and vacancy rates among a longitudinal sample of 2,964 social care providers (employers) in England. The panel of 2,964 providers analysed in this report is studied at two time points, January 2008 (T1) to January 2010 (T2), used to investigate changes in turnover and vacancy rates as well as perceived reasons for leaving a job. The sample is satisfactorily representative of the overall NMDS-SC returns at T1. The specific aims of the analysis were to explore the following questions:

1. Have reported turnover and vacancy rates among care workers changed from 2008 - 2010 and in what ways?
2. What are the characteristics of organisations, which reported an improvement (a decline) in care worker turnover and vacancy rates compared to those who experienced higher turnover and greater vacancies?
3. Have the reasons for leaving jobs identified by providers changed over the time period 2008-2010?

4. Are there any significant differences in reasons for leaving among groups of providers that have different patterns of turnover and vacancy rates?

For the panel of providers examined in this study the overall turnover rate remained almost unchanged from the period 2008-2010. Mean turnover rate was 22.5 percent in T1 (median=14.29) and 22.9 percent in T2 (median=14.29). This means that on average around a quarter (24 %) of the care workforce changed their jobs within the previous 12 months prior to the beginning of 2008, with similar workforce traffic 18 months later. A turnover rate of 22 to 23 percent is considerably higher than that of other work sectors in the UK, standing at 15.7 percent, however, it is considerably lower than the 34 percent turnover rate observed in the catering and leisure industry.

Sector is one of the most important characteristics associated with different measures of workforce stability in social care and appears to reflect the profit or non-profit status of providers. The longitudinal findings show that care worker turnover rate is highest among private providers, especially in T1 (25% at T1 and 24.8% at T2). This compared to only 10.6 percent in the public sector (local authority or local authority owned organisations[1]) at T1 and 8 percent in T2. Care worker turnover rates among providers from other sectors (including health) stood at 20 percent around in T1 and increased to 23.9 percent by T2. However, changes in turnover rates had not changed significantly from 2008 to 2010, except for providers in 'other' sectors, where turnover rates significantly increased.

Organisation size has significant intended (and unintended) implications for human resource (HR) practice, management styles and how workers interact and co-operate. The longitudinal panel sample indicates that care worker turnover rate is significantly lower in larger organisations (16%); however, the number of large organisations in the sample is relatively small (n=15-18).

The type of care setting is likely to be associated with both recruitment and retention of care workers. With domiciliary (home) care offering flexibility of work, it may attract people willing to work unsociable hours, which may suit other family commitments. The providers' panel analysis shows that care worker turnover rates were considerably lower among those providing health care services (such as home nursing as part of social care) when compared to other types of providers. Care worker turnover rate was highest among children's care services, adult residential care (care homes) and adult domiciliary care settings. Little change in turnover rate was observed by type of care setting, with the exception of adult community care where care worker turnover rates declined from 11.5 percent in T1 to 8.5 percent in T2, but none were statistically significant.

[1] In this report the term 'organisation' is used to refer to providers of social care. The term includes both care home and home care providers among others, but is not synonymous to 'parent organisations'. Within the NMDS-SC the term 'establishment' is usually used to refer to the same group.

For the 2,415 providers for whom panel information could be included in the current turnover analysis, from January 2008 to January 2010, turnover rates remained the same for over half of them, while 26.7 percent of providers experienced an increase in care worker turnover rate. An almost equal proportion of providers experienced an improvement (decline) in their care worker turnover rate. The panel analysis shows that for all providers included in the panel, the mean change in turnover rate across individual providers from T1 to T2 increased by 1.1 percent; this overall change was not statistically significant. However, changes within individual organisations varied significantly. For the 644 providers who observed an increase in care worker turnover rates over the period 2008-2010, the mean change for individual employers is a staggering 30 percent. On balance, another 644 providers experienced improvement in their individual turnover rates, with an average significant reduction of 26.3 percent. These large changes are, in some cases, because of the small size of some organisations where additional losses of few staff members may make a large difference in turnover rates.

The longitudinal analysis shows that voluntary providers are more likely to be found within the groups of providers with stable turnover rates when compared to those with improved or worsening turnover rates. Changes (positive or negative) are significantly more likely to occur within the private sector. Small organisations are significantly over-represented within providers with decreased (improved) tunover rate during the period of this study, while medium size organisations are over-represented among the group with increased (worse) turnover rates. Some significant regional differences emerged in the distribution of providers within different groups. For example, proportionally more providers in East and West Midlands and South West are represented within the group of providers with improved turnover rates. In terms of type of service settings, adult residential providers (care homes in the main) are significantly over-represented within the group of providers with imporved care worker turnover, while the opposite is true for adult domiciliary (home care) providers.

The longitudinal analysis shows that average care worker vacancy rate declined from 4.6 percent in T1 to 3.9 percent in T2. However, over three quarters of providers experienced no change in care worker vacancy rates over the period of study. Around 14 percent of providers (348) experienced a significant reduction in their care worker vacancy rate from a mean of 18.7 percent at T1 to less than 5 percent at T2. Another smaller group of 201 providers (8.3%) experienced increases in their care worker vacancy rates from 5.4 percent at T1 to nearly 20 percent at T2.

Care worker vacancy rates declined in all regions over the period 2008-2010, except in London. The current longitudinal analysis, in which social workers are not included, reveals that care worker vacancy rates declined in all sectors over the period 2008 to 2010. By January 2010, the mean vacancy rate for care workers among private providers was 3.7 percent, which is very close to the 3.3 percent among providers in the voluntary sector and slightly higher than that in local authority providers. The longitudinal analysis shows that organisations of

all sizes experienced reductions in care worker vacancy rates from T1 to T2. Vacancy rates varied considerably by type of care setting, with the lowest care worker vacancy rates being in adult day care and health services. On the other hand, care worker vacancy rates are very high in adult domiciliary and community care settings in comparison to that observed in adult day care.

The longitudinal analysis examined changes in employers' perceived reasons for staff leaving their jobs. A comparative analysis of reasons and changes over time was conducted among three main groups of providers: 1) Those who did not expereince any change in their turnover rate from T1 to T2; 2) Those who experienced an improvement (decline) in their turnover rates; and 3) Those who saw care workers turnover rates increase over time. For organisations with no change in turnover rates, the distribution of perceived reasons for leaving remained almost unchanged from T1 to T2, with the exception of 'personal reasons' and 'reasons unknown'. The changes in these percentages are, however, very small in magnitude. Overall, the patterns of reasons for leaving remained virtually the same over the period of study. For providers with increases in care worker turnover rates the relative importance of almost all different reasons for leaving has slightly (but statistically significant) declined from T1 to T2 except for 'unknown reasons' and 'dismissals'. The only two reasons with no relative changes over time were redundancy and end of contracts. For providers that experienced an improvement in turnover rates, the importance of pay as a reason for leaving was significantly reduced by 0.2 percentage points from T1 to T2. Other significant but small changes in magnitude are: an increase in the relative importance of personal reasons; a decline in the importance of 'nature of work' and a decline in 'unknown reasons'. Although the changes in relative importance of different reasons for leaving are very small, they suggest that some improvement may be occurring in terms of perceptions of pay and attracting the right people who recognise the nature of the work involved in social care.

Background

It is frequently observed that changing demographics and an ageing population are increasing the demand for social care while traditional pools of social care staff are becoming less available (Hussein and Manthorpe, 2005). At the same time, regulatory changes designed to improve the quality of social care services have led to an increased call for care qualifications such as NVQs (National Vocational Qualifications) (Roche and Rankin, 2004) and more recently their successors under the Qualifications and Credit Framework. However, more recent regulations focused more on independent living, inspection regimes and outcomes for services (Department of Health 2010). These factors contribute to widespread longstanding concerns about the sustainability of recruitment and retention in the social care workforce across the statutory, private and voluntary sectors and in all parts of the United Kingdom (UK).

Over the last decade estimating the size and distribution of the social care workforce has been difficult. This is mainly due to the lack of specific, standardized data that relate specifically to the social care sector. Prior to the organisation of the National Minimum Data Set for Social Care (NMDS-SC) in 2005/2006, estimates relied on the use of the Standardized Occupation Classifications (SOC) or Local Government Association Surveys to identify people working in social care through national surveys, such as the Labour Force Survey. However, there were many limitations in this approach, which hindered the accuracy of its estimates: such as changes in the definition of occupations related to the care sector (for example, see Simon et al 2007).

In the social care sector there has been growing concern about high vacancy and turnover rates, particularly in relation to frontline care staff, for example, care workers (Learning and Skills Council 2006, Hussein 2009). The reasons for this lack of staff are various; for example, the 2009 National Employers Skills Survey indicated that 12 percent of total social care vacancies were due to skills shortages, compared to 16 percent in all industrial, commercial and public sector activities in England. Nonetheless, high turnover rates of care workers are of particular concern as they are directly associated with diminished continuity and quality of care. In 2011, a survey conducted by the National Care Forum (NCF) (voluntary sector homes in the main) of NCF member organisations found that over 40 percent of care home frontline staff left their job within a year of taking up the post (NCF 2011). Both vacancy and turnover rates have been associated with many organisational characteristics, particularly sector of employment and type of settings. Analysis of the National Minimum Data Set for Social Care (NMDS-SC) showed that although vacancy rates of direct care staff were relatively low in the private sector, turnover rates were highest among private organisations (Hussein 2009). High numbers of vacancies and high turnover rates affect service quality in a number of ways. The most apparent one is the level of risk associated with an understaffed service or with staff who do not have enough experience or skills to meet users' needs. In the United States (US), Castle and Engberg (2005) showed a significant association between different indicators of quality of care and turnover rates of nursing aides (generally equivalent to care home workers in the UK).

Partly as a consequence of recognising the importance of reducing vacancy and turnover rates in the care sector, government policy and campaigns have been developed to improve the status and attractiveness of social care work. The Department for Health launched its first media campaign in 2001 (Department of Health 2001), followed by a number of other recruitment campaigns (Improvement and Development Agency 2009). Since 2007 the Department of Health published a series of reports and policy documents covering recruitment solutions in social care, highlighting the significance of collaboration across statutory and non-statutory sectors and the importance of drawing on new pools of recruits (Department of Health 2007 and 2009). These efforts aimed to attract new recruits, possibly reaching people who might not otherwise consider working in the sector. However, recent data from the NMDS-SC indicate that turnover rates remain high and vacancy rates are very variable across organisations (Skills for Care 2010). Interestingly, new recruits appeared to have entered social care work not in response to these initiatives but from other developments, particularly the free movement of labour as permitted in the European Union (EU) and the enlargement of the EU with the accession of the A8 countries. At a strategic level, recruiting and retaining staff from diverse backgrounds and with wide range of knowledge and skills may become more important than meeting increasing demand in its simplest forms.

Direct care workers are the backbone of the social care workforce, constituting 72 percent of the workforce, which is equivalent to an estimated 1.2 million workers in England (Skills for Care workforce 2010). Pay rates are among the lowest in the UK (Low Pay Commission 2011); these rates are considerably lower within the private sector, which provides 75 percent of social care in England. Overall, the hourly pay rate of direct care workers is on or near the National Minimum Wage and very close to pay rates of ancillary non-care providing staff, such as cleaners (Hussein 2010a and 2010b). The majority of day-to-day services are provided by care workers in a context of policy ambitions for qualification and training, especially for those working with certain user groups such as older people with dementia. Additionally, with the policy of personalisation offering greater choices of care, new roles may involve supporting users to participate in wider society through employment and through greater engagement with local communities. Workforce development and business sustainability are essential in helping the care sector to develop new business and employment opportunities.

The consequences of turnover and vacancies among care workers, whether in care homes or home care, are extensive. They range from increased costs, particularly because 80 - 85 percent of social care budget is spent on workforce costs; perceived lower quality of care; and negative impacts on job satisfaction, and staff mental and general health. The economic costs alone of high turnover and vacancy rate are considerable if training, loss of skills and experience, and recruitment and induction costs are taken into account. Organisational characteristics appear to be key in maintaining both vacancy and turnover rates at a reasonable level. Level of wages, working conditions, recruitment strategies and management styles are important elements in job satisfaction and intention

to leave among frontline staff. The availability of data through the NMDS-SC provides an opportunity to gain further workforce intelligence about how turnover and vacancy rates are changing. This is because the NMDS-SC contains longitudinal data about a sizeable sample of providers (organisations or employers) and allows the investigation of changes over time among this particular group. Taking a follow up approach offers potentially more accurate estimates of changes in turnover and vacancy rates and enables the identification of any different organisational characteristics, which are linked to reductions in these elements over time. Following up the same group of providers has further advantages over repeated cross-sectional analysis as it provides a more accurate picture of change over time. Longitudinal data differ greatly from the collection of repeated cross-sectional data. With cross-sectional data, the calculated measures are representative of the population at a single period in time and information about the temporal aspects of a specific individual's changes is not necessarily available. Unlike cross-sectional studies, longitudinal studies track the same individual providers over time making information about changes more accurate as they have eliminated the effect of the sample composition and the averaging effect associated with repeated samples.

The current report focuses on understanding changes in direct care workers turnover and vacancy rates among a longitudinal sample of 2,964 social care providers in England. The panel of 2,964 providers analysed in this report is studied at two time points, January 2008 to January 2010, used to investigate changes in turnover and vacancy rates as well as perceived reasons for leaving a job. Specific aims of the analysis are to explore the following questions:

1. Have reported turnover and vacancy rates among care workers changed from 2008 - 2010 and in what ways?
2. What are the characteristics of organisations, which reported an improvement in care worker turnover and vacancy rates compared to those who experienced higher turnover and greater vacancies?
3. Have the reasons for leaving jobs identified by providers changed over the time period 2008-2010?
4. Are there any significant differences in reasons for leaving among groups of providers with different patterns of change in turnover and vacancy rates?

This report includes a section on methods summarising the process of extracting the current panel sample. The methods section discusses the representativeness of the panel sample when compared to the NMDS-SC complete records in March and June 2008 as well as data quality checks. The findings of different elements of the analysis are reported separately, starting with changes in turnover rates of care workers within the longitudinal providers' panel, then vacancy rates. We also investigate changes in perceived reasons for leaving jobs, separating individual providers where turnover and vacancy rates appear to have become more challenging over time and those providers which saw improvement in these workforce stability measures. Findings are then considered in the current policy and economic context in the discussion section.

Methods

The NMDS-SC is the first attempt to gather standardized workforce information for the social care sector. is the NMDS-SC was developed by a technical working group comprising of numerous stakeholders. Stakeholders included the Department of Health, Department for Education, Care Quality Commission, Children Workforce Development Centre, Local Government Association and employers. The NMDS-SC is managed by Skills for Care on behalf of the Department of Health. It aims to gather a 'minimum' set of information about services and staff across all service user groups and sectors within the social care sector in England. The NMDS-SC was launched in October 2005, and the online version in July 2007; since then there has been a remarkable increase in the number of employers completing the national dataset. The NMDS-SC collects information from employers on the organisation and service(s) provided as well as total numbers of staff working in different job roles. Employers also provide information about individual staff members offering a detailed picture of the workforce.

A longitudinal approach provides a considerable number of advantages over repeated cross-sectional studies. One of the main advantages is related to higher confidences in establishing cause and effect estimates. The approach economises on subjects, where subjects serve as their own control, thus directly resulting in the exclusion of between-subject variation from error. The strengths lies in the level of efficient estimators produced from the same number of subjects when compared to cross-sectional design. A longitudinal approach separate 'ageing' effect (i.e. changes over time within individuals) from 'cohort' effects (differences between subjects at baseline); cross-sectional design cannot do this.

While a longitudinal approach has several advantages, it poses a number of challenges. Among the challenges, it is computationally intensive to construct, there are variability in the NMDS-SC over time, there is unbalanced design in the times and intervals of updates, and there is, of course, the issue of missing data and attrition and how to handle this. The analytical methodologies are consequently more sophisticated and are not commonly supported by statistical software.

During 2010 the Social Care Workforce Research Unit (SCWRU) started examining the possibility of linking individual workers' records from different NMDS-SC datasets from as early as Dec 2007. Skills for Care (SfC) and SCWRU agreed the value of this project and SfC has provided SCWRU with anonymised NMDS-SC provision and workers' databases from Dec 2007 to Dec 2010 at three monthly intervals. Further data have been received three months subsequently. NMDS-SC data are archived by Skills for Care, from time to time; during that archiving process older records may disappear from newer datasets. Additionally, when employers update any workers' records the older records are replaced by the new records and the new dataset only includes the new updated records. Thus it was essential to consider as many historical datasets as possible, and then continue a process of updates in short time intervals. Due to the accumulative and expandable nature of the NMDS-SC, efforts to construct

longitudinal records will be continuous with new returns reflecting new data from employers as well as returns with new information on their workforce to maximise event capturing.

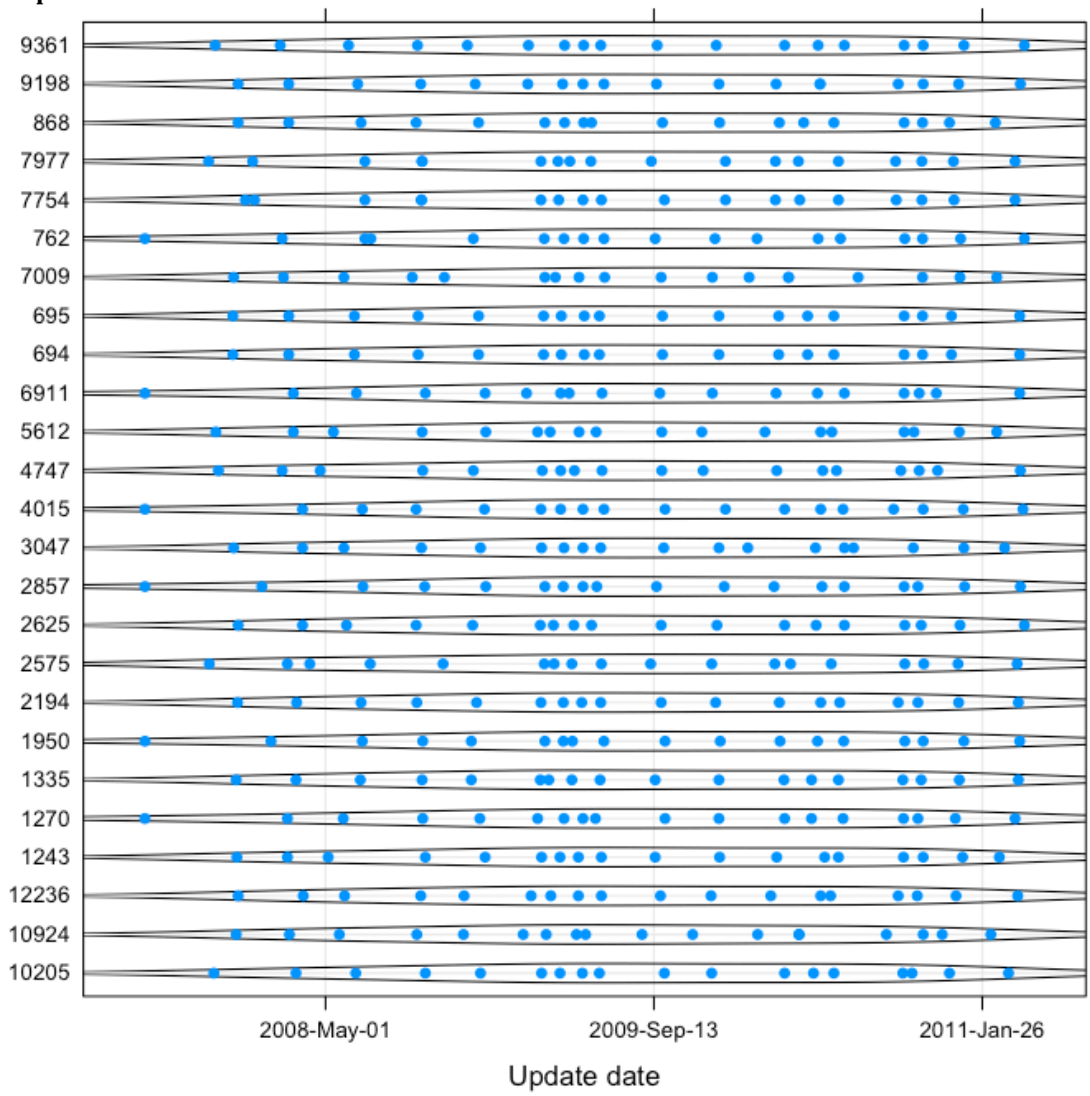
In this report, our focus is on provider level data. The data include information on the type and location of provider as well as the main services provided, capacity and uptake, and service users groups. The data also include information on the total number of the workforce covering different job roles that are employed under various types of contracts (e.g. permanent, temporary, etc.) and contain information on the numbers of starters and leavers. For leavers, the data contain further information on the total numbers who have left their jobs for different destinations[2].

The first longitudinal construction exercise of the NMDS-SC, with part of it used for the analysis reported here, covers 18 NMDS-SC datasets spanning the period from Dec 2007 to March 2011, with the number of records ranging from 13,095 to 25,266 in each dataset, covering 421,671 providers records (including updates). The process employs a concept of longitudinal mapping, which allows flexibility in choosing the unit of analysis (provider or individual worker) as well as the time points and their frequencies, which were included in the analysis. After initial inspection of data and constructing meta-data analysis of all datasets, we producing two 'longitudinal maps'; one for the provisions and one for individual workers records. The 'maps' identify units (individual or provider) that have more than one update over the period considered. They also indicate how many events are recorded for different units and when each of the events has appeared (i.e. which dataset). The initial examination indicated that the data had very good potential in providing information about change over time for a large sample of providers. For visualisation, Figure 1 provides an illustration of update events for providers with 17 updates during the period from Dec 2007 to March 2011.

The structure of the NMDS-SC allowed us to investigate longitudinal changes at different levels of hierarchies. For example, at local area level we can identify changes in providers' capacity and types of services, client or user groups, overall staffing measurements, and these may be linked to other geographical, socio-demographic, and health and social care related local indicators. At provider level we can investigate job stability, which is the focus of this report, but also levels and characteristics of staffing including the use of temporary and agency staff amongst others. Due to the large number of characteristics provided for individual workers, longitudinal analysis of individual workers' records permit investigation of an array of complex research questions and hypotheses.

[2] For further details of data items collected in the NMDS-SC see: http://www.nmds-sc-online.org.uk/Get.aspx?id=641172

Figure 1 Visualisation of longitudinal records of providers with 17 updated events during the period December 2007 and March 2011



For the current analysis we focused on examining changes occurring to the same group of providers (employers) with at least two updated events over a period of 18 months, which offered enough time to observe any patterns. Figure 2 shows the density distribution plot of the updates of this group over time, and Figure 3 shows the range of time between each two updates.

Figure 2 Density distribution plot of providers with at least 2 updates during the period December 2007 to March 2011

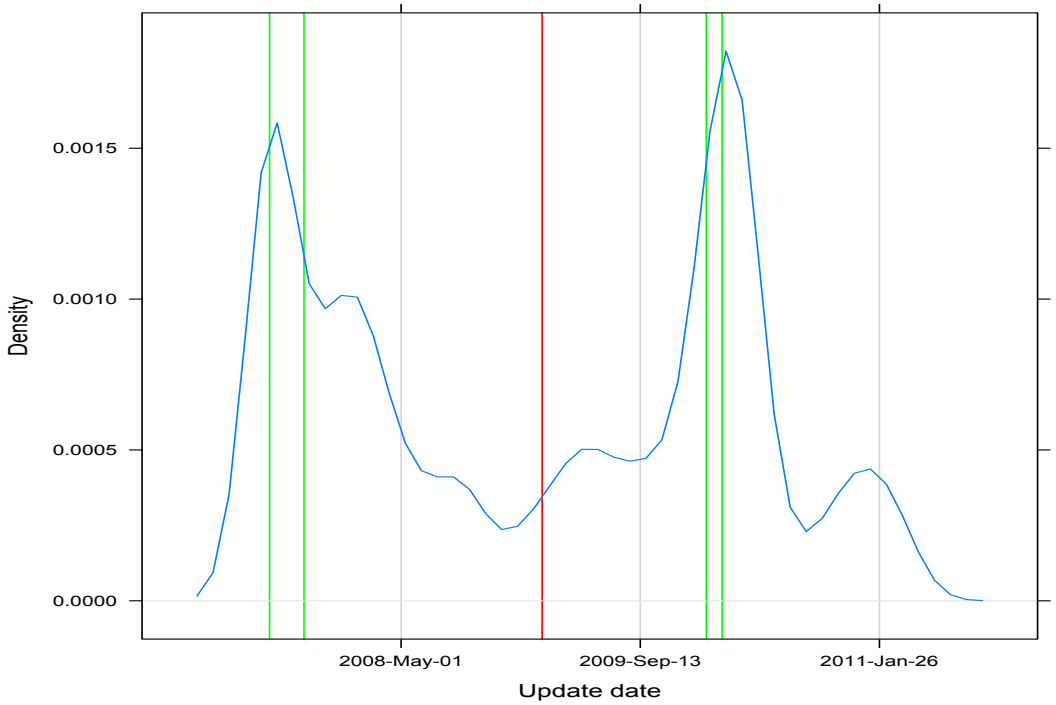
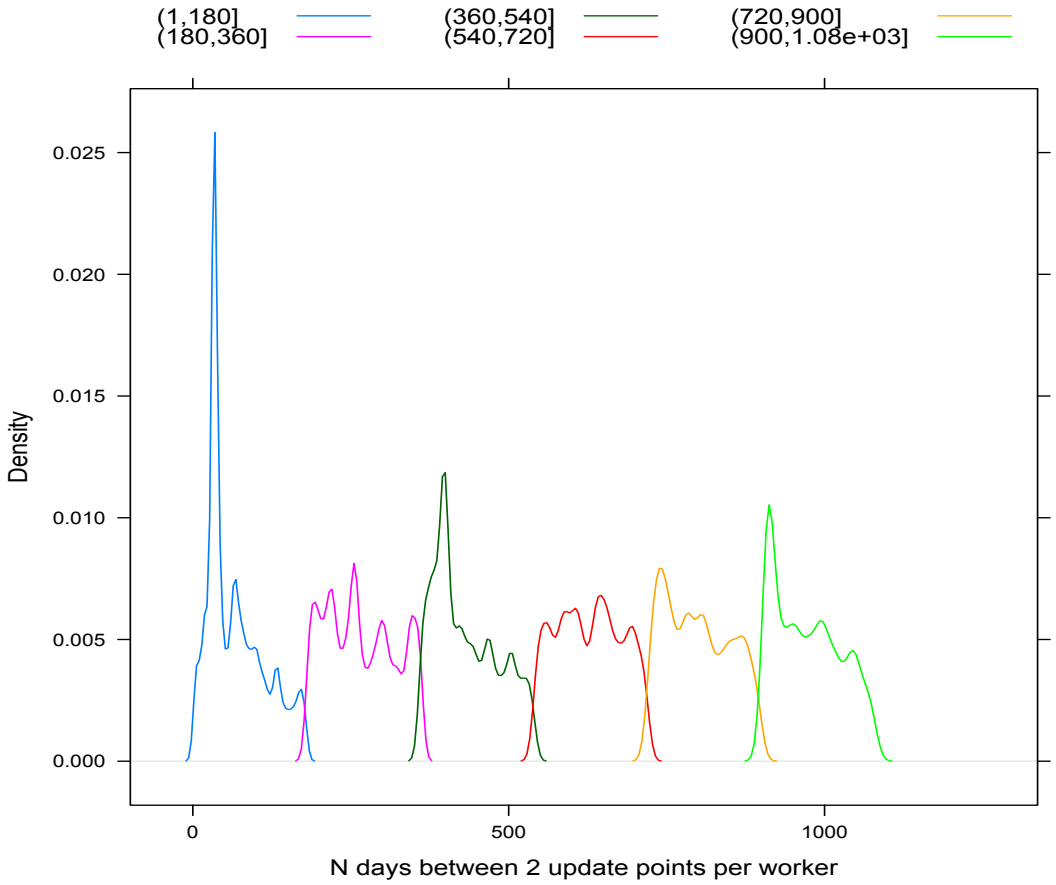


Figure 3 density distributions of number of days elapsed between two updated providers' events



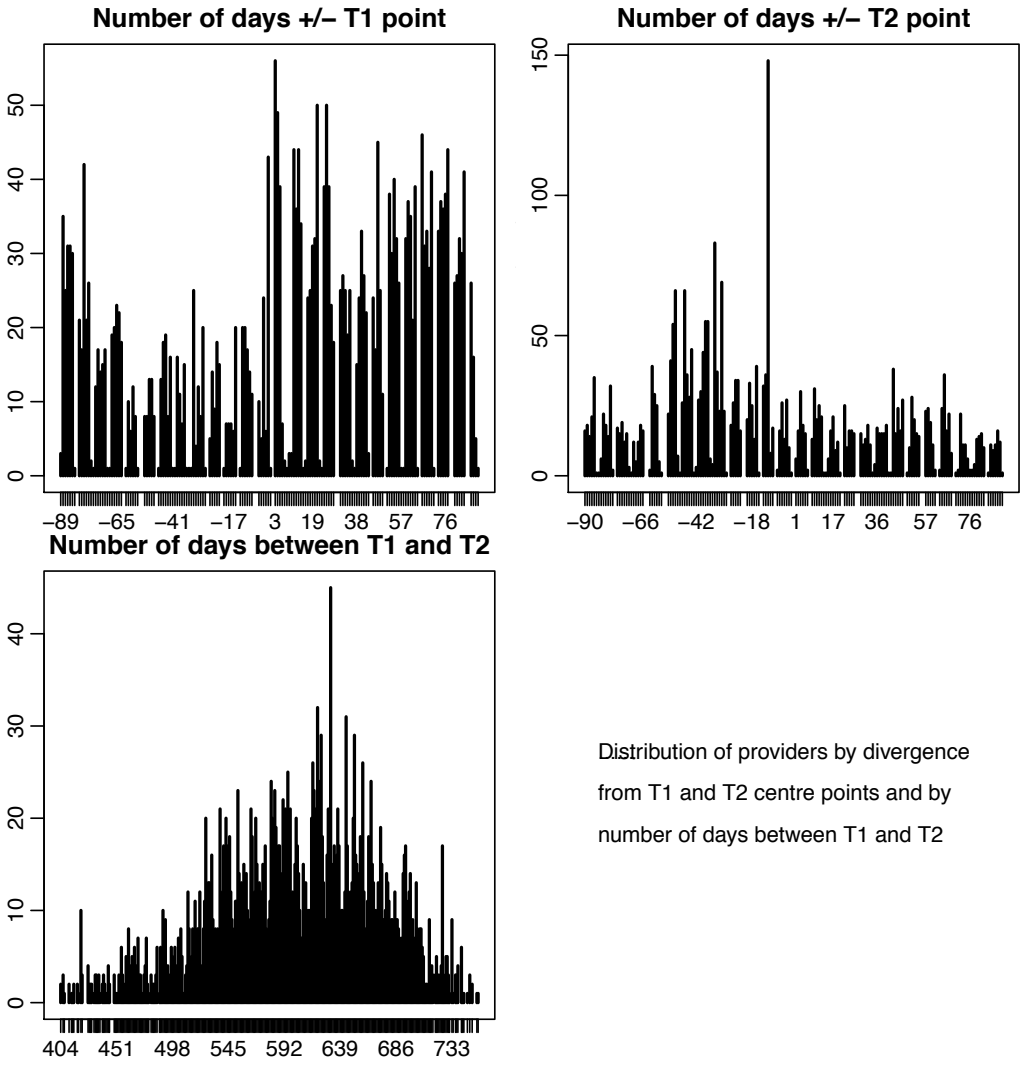
For the current analysis, we defined two data points, March 2008 (T1) and Sep 2009 (T2), allowing +/- 3 months margin at each time point, with an average of 18 months difference between T1 and T2, thus covering the period from beginning of January 2008 to January 2010. Using 18 NMDS-SC datasets, we included any provider with two updates in the region of T1 and T2 resulting in a panel sample of 2964 providers. This large group of providers enabled estimates to be made about changes in care worker turnover and vacancy rates over the period of interest. In future analyses we will be adding a further point (T3) to cover another 18 months (+/- 3 months), this will examine changes up to June 2011.

The focus of this report is on changes in workforce stability measures among care workers. For each provider we calculated the turnover and vacancy rates of care workers in their service at T1 and T2 and identified two groups of providers where (for care workers): 1. Turnover and/or vacancy rates *increased* over time and 2. Turnover and/or vacancy rates *decreased* over time. We then investigated if there were any differences in the characteristics of these two groups of providers and analysed changes in reported reasons for job departure between T1 and T2 exploring any differences between the two groups of providers.

Providers' panel sample

Figure 4 shows the distribution of differences between T1 and first recorded date of sample providers. For the panel sample, Figure 4, top left corner, shows the differences to be uniformly distributed around the centre of T1. The top right graph in Figure 4 represents the distribution of differences between 2 data points of sample providers and the centre of T2, and the bottom left graph shows the distribution of the distance between each update dates per provider. The number of days between T1 and T2 appears to be normally distributed around the mean of 602 days (only 23 days difference from the 18 months assumption), which indicates that the sample fits nicely with the choice of 18 months apart and the choice of the centre of T1 and T2.

Figure 4 Distribution of number of days convergence from midpoints at T1 and T2 and distribution of number of days elapsed from T1 and T2 for the providers' panel sample



Distribution of providers by divergence from T1 and T2 centre points and by number of days between T1 and T2

Panel sample description and representativeness

It is important to establish how the identified panel sample compares to the main returns of NMDS-SC. To establish whether the sample is representative of the NMDS-SC we compared its distribution to that of two complete NMDS-SC returns, March 2008 and June 2008, using a number of key characteristics including sector, organisation size, and so on.

Table 1 presents the distribution of the panel sample by sector compared to NMDS-SC complete returns in March and June 2008. The data show that three distributions by sector are not significantly different (χ^2 =3.69, d.f. = 14, p= 0.997). Nearly two thirds of providers operate in the private sector and around a quarter in the voluntary sector.

Table 1 Distribution of panel sample of providers by sector compared to that of NMDS-SC overall returns in March and June 2008

	Panel Sample		*NMDS-SC Mar-08*		*NMDS-SC Jun-08*	
Sector	*N*	*%*	*N*	*%*	*N*	*%*
LA (Adult)	116	3.9	1188	6.8	1727	9.0
LA (Children)	4	0.1	87	0.5	92	0.5
LA (Generic)	18	0.6	67	0.4	74	0.4
LA owned	9	0.3	175	1.0	179	0.9
Health	6	0.2	111	0.6	112	0.6
Private	1850	62.7	10882	61.9	11579	60.5
Voluntary	783	26.5	4435	25.2	4680	24.5
Other	167	5.7	641	3.6	682	3.6
Total	2953	100.0	17586	100.0	19125	100.0

Table 2 shows that the panel sample distribution by organisation size[3] is very close to that of NMDS-SC March and June 2008, the small differences observed are not significantly different (χ^2 = 1.145, d.f. = 6, p-value = 0.980). The majority of providers are of small size (with 10-49 staff members) and a small fraction of them (0.5 percent) consist of large organisations (with 200 or more staff members).

Table 2 Distribution of panel sample of providers by organisation sector compared to that of NMDS-SC overall returns in March and June 2008

	Panel Sample		*NMDS-SC Mar-08*		*NMDS-SC Jun-08*	
Organisation size	*N*	*%*	*N*	*N*	*%*	*N*
Micro	538	19.7	4102	24.3	4625	25.3
Small	1696	62.1	10078	59.8	10791	59.2
Medium	484	17.7	2585	15.3	2734	15.0
Large	15	0.5	92	0.6	89	0.5
Total	2733	100.0	16857	100.0	18239	100.0

Table 3 presents the distribution of the panel sample by region compared to that of NMDS-SC March and June 2008. The data indicate that the three distributions are very similar with some small differences; however, these differences are not statistically significant (χ^2 = 9.789, d.f. = 16, p-value = 0.877). Proportionally more providers in the sample are located in the South East and fewer in London; however, the pattern of regional distribution is very similar to the overall NMDS-SC returns. Overall, fewer providers are located in the North East and Yorkshire and the Humber.

[3] Micro employers = less than 10 staff members, small = 10-49 staff members, medium = 50-199 and large = 200 or more staff members.

Table 3 Distribution of panel sample of providers by region compared to that of NMDS-SC overall returns in March and June 2008

	Panel Sample		*NMDS-SC Mar-08*		*NMDS-SC Jun-08*	
Region	*N*	*%*	*N*	*N*	*%*	*N*
Eastern	255	8.6	2232	12.5	2288	11.8
East Midlands	260	8.8	1549	8.7	2019	10.4
London	274	9.2	3076	17.3	3221	16.7
North East	101	3.4	880	4.9	908	4.7
North West	328	11.1	2673	15.0	2784	14.3
South East	781	26.4	2769	15.5	3099	16.0
South West	372	12.5	1706	9.6	1933	10.0
West Midlands	331	11.2	1789	10.0	1856	9.6
Yorkshire & Humber	262	8.8	1140	6.4	1236	6.4
Total	2964	100.0	17814	100.0	19344	100.0

Data quality checks

We have conducted a number of data quality checks on the panel sample, including comparing main organisational characteristics over time. For a small number of providers (n=49), the sector of provision changed from T1 to T2. The majority were reported at T1 to be in 'Other' sector, while specific sectors were identified at T2. After checking with Skills for Care (SfC), it emerged that SfC undertook several steps to reduce the number of organisations classified as 'other' sectors. After contacting individual providers SfC has been able to review such data and recode them more precisely at a later date. Thus in the current analysis we have decided to use the sector reported at T2 as being the more accurate information.

Another characteristic that showed some discrepancies from T1 to T2 was organisation size. For a group of providers (n=281), organisation size changed from T1 to T2. We have reviewed these changes and it is likely that such changes reflect natural change, as the movement was only one step (e.g. from small to medium or from micro to small). Therefore, we treated those as an acceptable change over time rather than any types of error.

Findings

Care worker turnover rates 2008 to 2010

Researchers and other groups use a wide variety of definitions and measures of turnover. Different definitions may apply to the period of time covered, whether the proportion of 'stayers' relative to 'leavers' are accounted for, and whether only voluntary turnover is counted (i.e. not dismissals). Here, we calculate turnover rate as the number of care workers who left their employers within the past 12 months of the data collection point as a proportion of number of care workers in permanent and temporary work arrangements at the time of data collection.

Several models of staff turnover exist in the economic, human resource and organisational literature. Many highlight the high association of turnover with individual job satisfaction (e.g. Parsons et al 2003). However, organisation and work environment factors, such as management styles, team support and working conditions play important roles in staff retention (Castle and Engberg 2006). The organisational effects of turnover are likely to be particularly important in the case of care workers where job satisfaction is usually reported as high, with almost nine in ten care workers in a Skills for Care survey reporting being happy with their jobs (TNS 2007). With the intrinsic caring nature of the job and associated emotional attachment and expectations, most reported work motivations of care workers are altruistic in nature and there are expectations of high job satisfaction and emotional rewards from the job. Current knowledge about care workers' job satisfaction does not separate 'occupational' satisfaction and 'job' satisfaction (or satisfaction with individual employers). Recent analysis indicates that 'occupational' embeddedness appears to be more prevalent than 'job' embeddedness in the care sector (Hussein 2010c) meaning that workers appear to be moving from one employer to another while remaining in the sector in search of higher levels of job satisfaction or better working conditions.

Some of the most commonly cited organisational predictors of turnover include staffing levels (including organisation size), senior management turnover and profit status (public, private and not-for-profit or charitable). Workload level, pay and working conditions are associated with the amount of profits expected by different organisations. The same factors are also linked with care workers' job satisfaction and intention to leave. However, research in the United States shows that effects of these factors on turnover vary by type of services provided and local economic conditions (Donoghue and Castle 2007).

For the panel of providers examined in this study the overall turnover rate remained almost unchanged from the period 2008-2010. Mean turnover rate was 22.5 percent in T1 (median=14.29) and 22.9 percent in T2 (median=14.29). This means that on average around a quarter (24 %) of the care workforce changed their jobs within the previous 12 months prior to March 2008, with similar workforce traffic 18 months later. A turnover rate of 22 to 23 percent is

considerably higher than that of different sectors in the UK, standing at 15.7 percent, however, it is considerably lower than the 34 percent turnover rate observed in the catering and leisure industry (CIPD 2009). Moreover, this rate is considerably lower than the estimated 56.4 percent turnover rate among nurse aides[4] in six of the United States (Castle and Engberg 2006).

Regional variations in care worker turnover

Table 4 indicates that care worker turnover rates are lowest among providers located in London both in 2008 and 2010; however, they increased by 2.2 percent over the same period. The low turnover rate in London may be associated with the high prevalence of non-EEA migrants in London compared to other regions. Non-EEA migrants are usually subject to more immigration control that may prevent them from changing employers. By January 2010 care worker turnover rate was highest in the East and West Midlands and the South West (from 25 to 26 percent). The largest increases in care worker turnover rates were in the North West and the South West; however, none of these changes from T1 to T2 are statistically significant.

Table 4 Care worker mean turnover rates at T1 and T2 by region

Region	*Number of providers*	*Mean turnover rate*		*Paired t-test*	*p-value*
		T1	*T2*		
Eastern	255	22.6	21.2	-0.56	0.575
East Midlands	260	26.8	25.0	-0.53	0.596
London	274	15.5	17.7	0.78	0.435
North East	101	20.4	18.5	-0.37	0.711
North West	328	18.9	22.1	1.30	0.195
South East	781	23.2	22.0	-0.63	0.531
South West	372	22.9	26.0	1.13	0.258
West Midlands	331	23.9	25.7	0.64	0.518
Yorkshire & Humber	262	23.3	23.9	0.26	0.797

Organisational factors and turnover rate

The majority of care services in England are provided by the private sector; at the same time, the private sector is characterised by significantly lower pay levels and harder working conditions. The type and nature of setting and the way work is organised may also affect the impact of organisational characteristics on individual workers. For example, in domiciliary or home care, the lack of a fixed workplace means that levels and effects of management and co-workers are likely to be different from those within care homes. In this section we investigate levels of care worker turnover rates by different organisational characteristics as well as observed changes over time between different groups of providers.

[4] Nurse aide is the closest American equivalent job role to care workers in the United Kingdom.

Sector

Sector is one of the most important characteristics associated with different measures of workforce stability in social care as it reflects the profit status of providers. Previous analysis indicated that turnover rates are generally higher for different job roles within the private sector than other sectors (Hussein 2009). The private sector is also reported to have less favourite working conditions and lower levels of pay (Hussein 2010c, Rubery et al 2011). Table 4 shows that care worker turnover rate is highest among private providers, especially in T1 (25% at T1 and 24.8% at T2). This compared to only 10.6 percent in the public sector (Local authority or local authority owned organisations) at T1 and 8 percent in T2. Care worker turnover rates among providers from other sectors (including health) stood at 20 percent around in T1 and increased to 23.9 percent by T2.

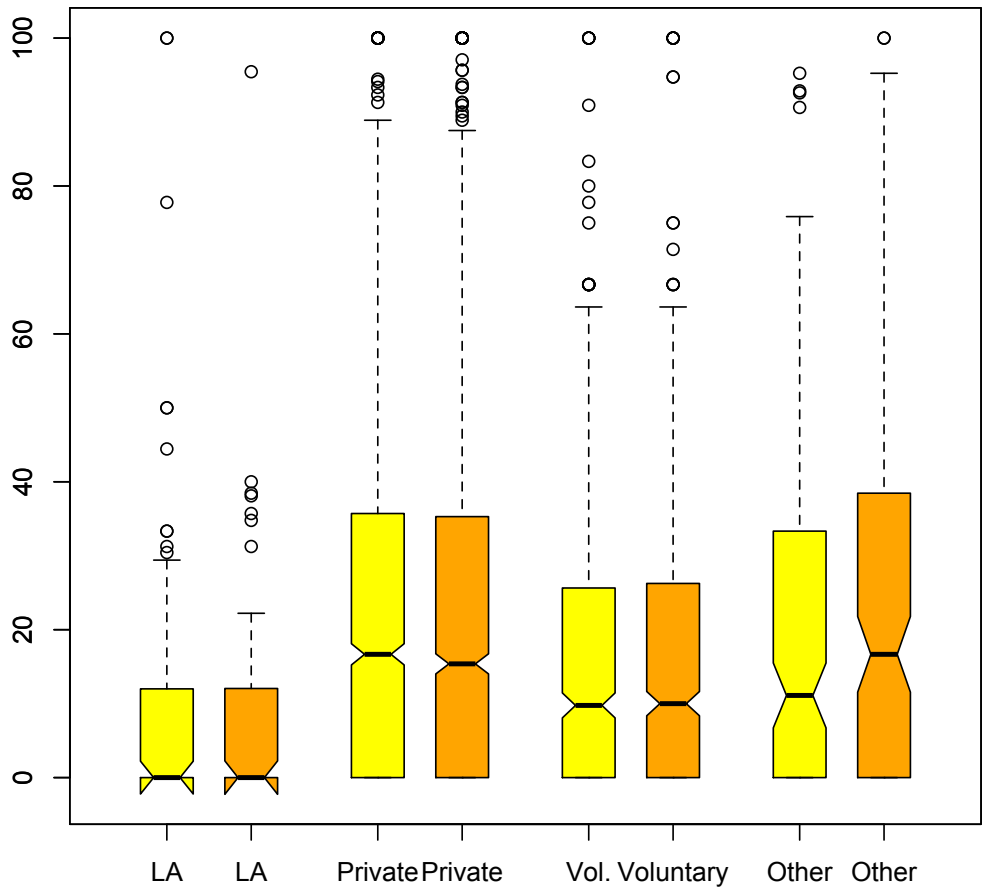
Table 5 Care worker mean turnover rates at T1 and T2 by sector

	Mean Turnover rate	
Sector	*T1*	*T2*
Public (local authority)	10.6	8.0
Private	25.0	24.9
Voluntary	17.7	19.4
Other	20.1	23.9

Figure 5 presents the distributions of care worker turnover rates within different sectors in T1 and T2. Box-plot distributions and notches[5] indicate that turnover rates did not significantly change over the period 2008-2010 in the main three sectors: public, private and voluntary sectors. For example, in the private sector the median care worker turnover rate declined slightly from 16.7 percent to 15.4 percent. However, the statistics indicate that the median turnover rate increased significantly from 11.1 percent at T1 to 16.7 percent within providers identified as belonging to 'other' sectors.

[5] The middle (or waist) of each box indicates median care workers' turnover rate; the top of the box is the 3rd quartile while the bottom of the box is the 1st quartile of turnover rate distributions within different sectors. Yellow boxes indicate turnover distributions at T1 and orange boxes indicate turnover distributions at T2. The statistical significance of the variations in median turnover rate can be explored graphically using Tukey's notches method. The notches are drawn as a 'waist' on either side of the median and are intended to give a rough impression of the significance of the differences between two medians. Boxes in which the notches do not overlap are likely to have significantly different medians (Rousseeuw and Ruts 1998).

Figure 5 Care workers turnover rate distributions at T1 and T2 by sector



Organisation size

Organisation size has significant intended (and unintended) implications for human resource (HR) practice, management styles and how workers interact and co-operate. These may affect staff retention both positively and negatively. For example, larger organisations may be better positioned to offer HR services and may offer wider opportunities for career progression and promotions. On the other hand, smaller organisations may offer better opportunities for closer supervisory and co-workers support. Rubery and colleagues (2011) found that the level of involvement by managers in staff appraisals was significantly higher within small sized organisations, for example.

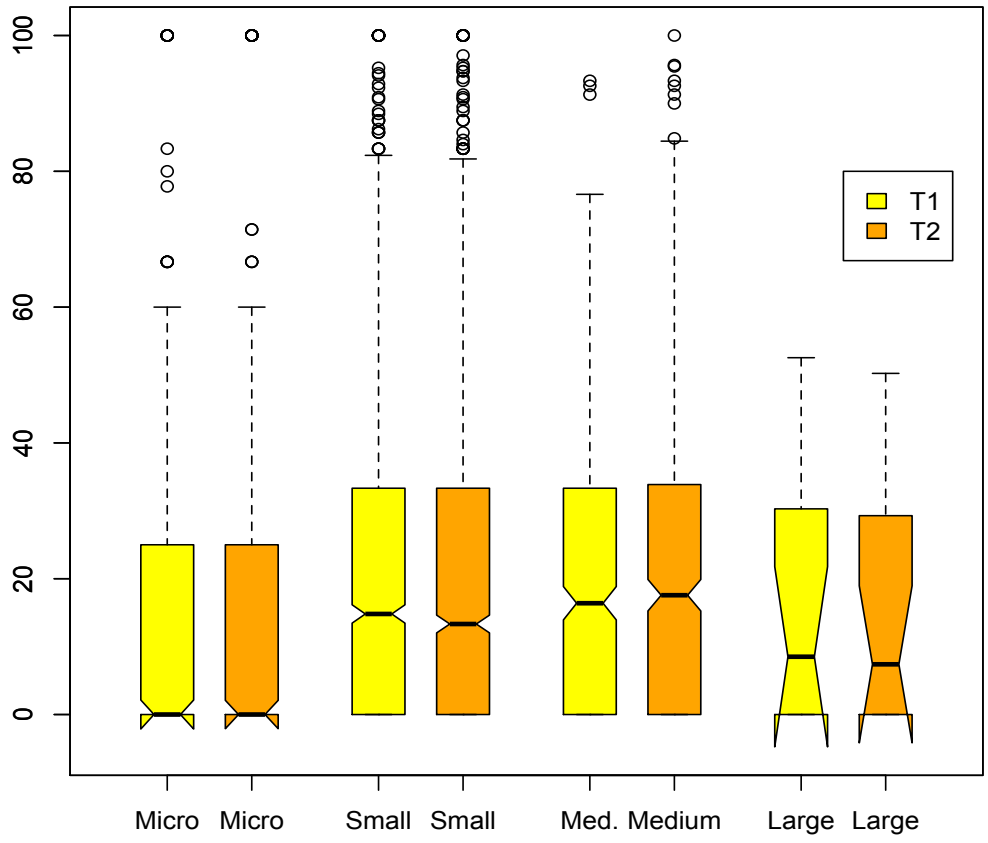
The longitudinal panel sample indicates that care worker turnover rate is significantly lower in larger organisations (16%), however, the number of large organisations in the sample is relatively small (n=15 to 18). Table 6 also shows that care worker turnover rate is not significantly different within other groups.

Table 6 Care worker mean turnover rates at T1 and T2 by organisation size

	T1		*T2*		*Paired t-test*	*p-value*
Organisation size	*Number of providers*[6]	*Mean Turnover rate*	*Number of providers*	*Mean Turnover rate*		
Micro	538	19.5	549	22.1	0.81	0.420
Small	1696	23.4	1805	23.0	-0.42	0.673
Medium	484	21.8	566	23.7	1.22	0.223
Large	15	16.4	18	15.0	-0.41	0.838

We investigated individual changes over time in turnover rates for different groups of providers according to the size of organisation. We present these movements graphically in Figure 6. Using both paired t-test of changes in the mean and using Tukey's notches approach for changes in the median, it is evident that the slight change observed over time is not significant.

Figure 6 Care worker turnover rate distributions at T1 and T2 by organisation size



[6] Some organizations changed size over time

Type of setting

The type of care setting is likely to be associated with both recruitment and retention of care workers. With domiciliary (home) care offering flexibility of work, it may attract people willing to work unsociable hours, which may suit other family commitments. Expectations that there will be travel between the homes of domiciliary care users will be a challenge for workers who do not drive or have access to cars or to very regular public transport. The work environment and availability of supervisors and co-workers are associated with work dynamics and may directly impact on workers' satisfaction and retention.

The providers' panel analysis shows that care worker turnover rates were considerably lower among those providing health care services (such as home nursing as part of social care) when compared to other type of providers. Table 6 shows that care worker turnover rate stood at only 4.2 percent at T1 with a slight increase to 5.7 percent by T2. Care worker turnover rate was highest among children's care services, adult residential care (care homes) and adult domiciliary care settings. Little change in turnover rate was observed by type of care setting, with the exception of adult community care where care worker turnover rates declined from 11.5 percent in T1 to 8.5 percent in T2. Using a paired t-test, to account for changes within individual providers over time, none of these observed changes are significantly different.

Table 7 Care worker mean turnover rates at T1 and T2 by type of care settings

Type of care setting	*Number of providers*	*Care Workers' Mean Turnover Rate*		*Paired t-test*	*p-value*
		(T1)	*(T2)*		
Adult-residential	2021	23.7	23.8	0.11	0.914
Adult- day care	123	14.1	15.4	0.34	0.733
Adult- domiciliary	623	21.5	22.8	0.74	0.458
Adult- community care	102	11.5	8.5	-0.92	0.362
Children's	54	21.3	24.0	0.39	0.696
Health	43	4.2	5.7	0.42	0.674
Other	108	15.2	24.1	0.85	0.405

Changes in care worker turnover rates 2008 to 2010

For the 2,415 providers for whom panel information could be included in the turnover analysis, over the period January 2008 to January 2010, turnover rates remained the same for over half of them (54.4%, n=1,165), while 26.7 percent (n=644) of providers experienced an increase in care worker turnover rate. An almost equal proportion of providers (25.1%, n=606) experienced an improvement (decline) in their care worker turnover rate. Table 8 shows that for all providers included in the panel, the mean change in turnover rate across individual providers from T1 to T2 increased by 1.1 percent (CI: -2.4% to 0.2%); this overall change was not significant (paired-*t*= -1.7; p=0.094). However, changes within individual organisations varied significantly as shown in the scatter plot of change presented in Figure 4.

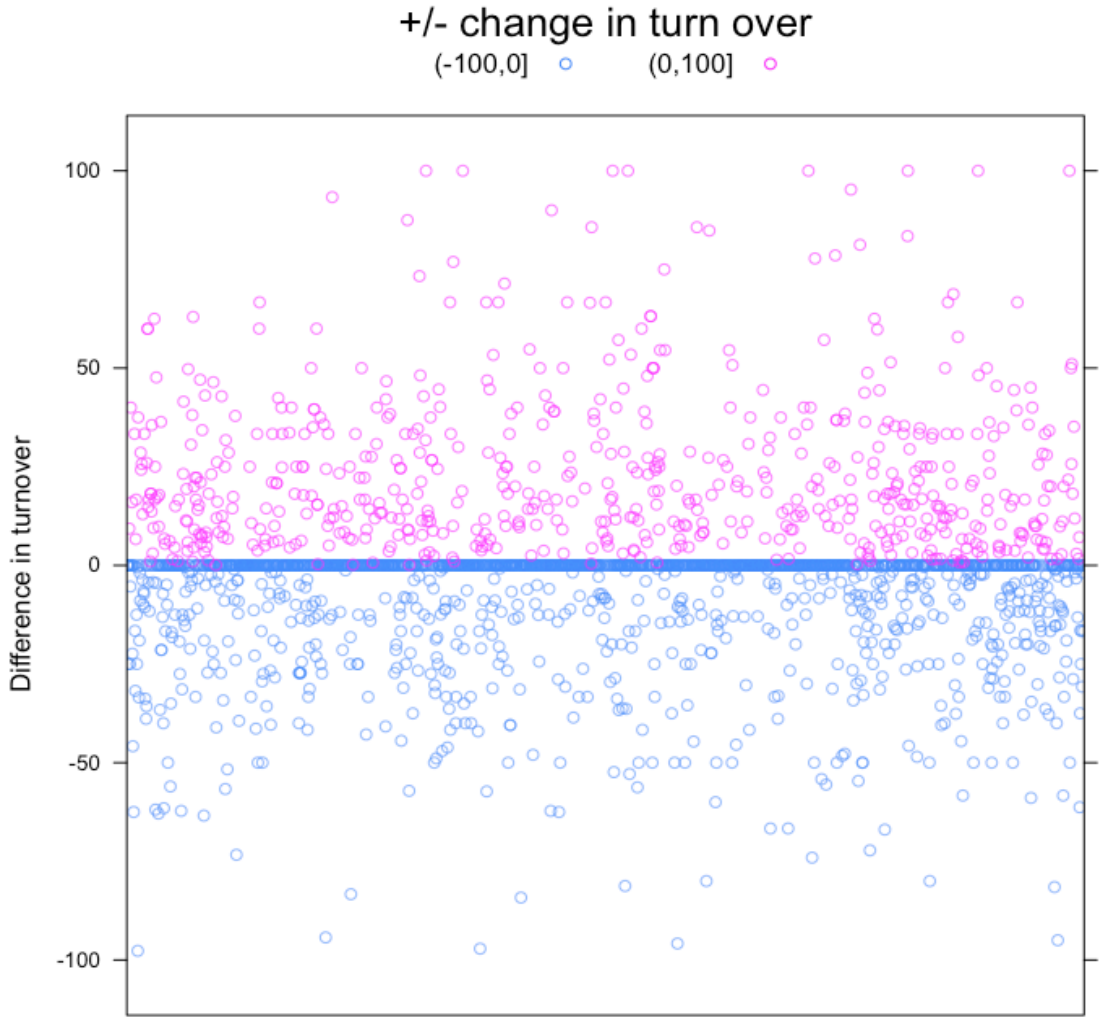
For the 644 providers who observed an increase in care worker turnover rates over the period 2008-2010, the mean change for individual employers is a staggering 30 percent (CI: -31.8% to -26.1%); these changes are statistically significant (paired-*t*= -19.8; p<0.001). On balance, another 644 providers experienced improvement in their individual turnover rates, with an average significant reduction of 26.3 percent (CI: 23.5% to 29.2%; paired-*t*=18; p<0.001). It is clear from the statistics that two distinct groups of providers are identified- the first is a group that started in March 2008 with a relatively low turnover rate (mean of 15%) but experienced significant increases by January 2010 and the second is an almost equal number of providers starting with a relatively high turnover rate (43.2%) who, over a period of 18 months, had reduced this turnover rate significantly. In a latter section in this report, we will provide in-depth analysis comparing these two groups to explore any significant variations in perceived explanations provided by employers about staff reasons for leaving their job over the 12 months prior to T1 and T2 time points.

Table 8 Changes in care worker turnover rate statistics for all panel providers and the two groups experiencing increases and decreases in turnover rate from T1 to T2

Care workers' turnover rate statistics	*All panel providers*	*Providers with increased turnover rate*	*Providers with decreased turnover rate*
Number of providers	2415	644	606
Mean turnover rate at T1	22.5	15.0	43.2
Mean turnover rate at T2	22.9	43.9	16.9
Paired mean change	-1.1	-30.0	26.3
95 % CI - Lower bound	-2.4	-31.8	23.5
95 % CI - Upper bound	0.2	-26.1	29.2
Paired t-test value	-1.7	-19.8	18.0
Significance (p-value)	0.094	<0.001	<0.001

Table 9 shows the distribution of all providers in the panel sample, those who expereinced no change in their care worker turnover rates from January 2008 to January 2010, those with increased turnover and those with declining turnover rates by main orgnaisaional characteristics. This analysis examines any movement of organisations to different groups, those with with distinct indictors of stability, increase and decline in care worker turnover rates. It should be noted that such changes do not specifically examine the amount of change within individual orangisations, these are examined in the previous section and most individual changes were not great. However, collectively care worker tunover rates changed signficantly within certain groups of employers, but remained stable among over half of all providers as discussed above (see Table 8).

Figure 7 Scatter plot of providers with negative and positive changes in care worker turnover rate from T1 to T2



The analysis shows that voluntary providers are more likely to be found within the groups of providers with stable turnover rates when compared to those with improved or worsening turnover rates. Changes (positive or negative) are significantly more likely to occur within the private sector (χ^2=21.5, d.f.=6, p=0.001). Small organisations (10-49 workers) are significantly over-represented within providers with decreased (improved) tunover rate during the period of this study, while medium size organisations (50-199 workers) are over-represented among the group with increased (worse) turnover rates (χ^2=33.9, d.f.=6, p<0.001).

Some significant regional differences emerged in the distribution of providers within different groups. For example, London providers are significantly under-represented in the group with improved turnover rates (4.6% of the group with improved tunover rates vs. 9.2% of the whole panel). On the other hand, proportionally more providers in East and West Midlands and South West are represented within the group of providers with improved turnover rates (χ^2=43.7, d.f.=16, p<0.001). In terms of type of service settings, adult residential providers (care homes in the main) are significantly over-represented within the

group of providers with imporved care worker turnover, while the opposite is true for adult domiciliary (home care) providers (χ^2=32.5, d.f.=12, p=0.001).

Table 9 Distributions of providers with different changes in care worker turnover rates from T1 to T2 by key organisational characteristics

Organisational characteristics	*Providers with no change in turnover*	*Providers with increased turnover*	*Providers with decreased turnover*
Sector			
LA	3.3%	2.7%	2.7%
Private	62.6%	68.9%	71.7%
Voluntary	26.7%	24.3%	21.2%
Other	7.5%	4.2%	4.5%
Size			
Micro	18.5%	11.7%	11.2%
Small	62.2%	65.5%	72.1%
Medium	18.9%	22.5%	16.0%
Large	0.5%	0.3%	0.7%
Region			
Eastern	9.5%	6.8%	8.8%
East Midlands	9.3%	8.2%	11.4%
London	8.0%	7.3%	4.6%
North East	4.0%	2.3%	3.1%
North West	9.6%	11.2%	7.8%
South East	29.1%	26.1%	28.9%
South West	10.5%	16.5%	13.9%
West Midlands	10.3%	12.1%	14.5%
Yorkshire & Humber	9.8%	9.5%	7.1%
Type of Setting			
Adult-residential	71.3%	73.8%	77.4%
Adult- day care	3.9%	1.7%	1.7%
Adult- domiciliary	18.7%	20.8%	18.0%
Adult- community care	1.6%	1.1%	1.2%
Children's	1.8%	1.6%	1.5%
Health	2.2%	0.8%	0.0%
Other	0.6%	0.3%	0.3%
Number of providers	1165	644	606

Care worker vacancy rates 2008 to 2010

Care worker vacancy rates are calculated in this report as the proportion of care work jobs vacant at each of T1 and T2 time points. The longitudinal analysis shows that the mean care worker vacancy rate declined from 4.6 percent in T1 to 3.9 percent in T2. This is comparable to care worker turnover rates of 3.9 percent as calculated from NMDS-SC May 2009 (Hussein 2009); indicating that the longitudinal providers' sample we have used here is representative of the overall care sector. However, care worker vacancy rates are considerably higher than the overall official published statistics estimating overall vacancy rates in the UK labour market at just 1.7 percent in June to August 2011 (CI: 1.6% to 1.8%[7]). What this study shows is that the care worker vacancy rate was significantly reduced over the period from 2008 to 2010 by an average of 1 percent. This is consistent with trends in vacancy rates in other job roles in the care sector (Community Care 2011) and is likely to be associated with the economic climate.

Regional variations in care worker vacancy rates

Table 10 indicates that care worker vacancy rate is highest in London, particularly at T2, this may be related to the high cost of living in London relative to the overall low levels of pay in the sector. On the other hand, it remained lowest in the North West and Yorkshire & Humber regions. Care worker vacancy rates declined in all regions over the period 2008-2010 except in London where it increased by 1.5 percent, however such change is not statistically significant. When examining changes in vacancy rates within individual providers in different regions, we can see that the most pronounced reductions took place in the West Midlands and the South East. However, such reductions were not statistically significant (p=0.08 and 0.09 respectively).

Table 10 Care worker mean vacancy rates at T1 and T2 by region

	Mean vacancy rate		*Paired t-test*	*p-value*
Region	*T1*	*T2*		
Eastern	4.1	2.6	-1.61	0.107
East Midlands	3.9	2.8	-0.99	0.322
London	6.0	7.5	0.88	0.377
North East	6.3	4.3	-1.62	0.281
North West	2.5	2.3	-0.27	0.788
South East	5.4	4.4	-1.66	0.098
South West	5.1	3.7	-1.48	0.140
West Midlands	5.0	3.4	-1.74	0.083
Yorkshire & Humber	3.3	2.4	1.58	0.114

[7] www.ons.gov.uk

Organisational factors and care worker vacancy rates

Sector

Previous analysis of overall vacancy rates in the overall care sector indicated a significant public-private gap with significantly higher vacancy rate in the public sector, especially for more qualified job roles such as social work (Hussein 2009). The current longitudinal analysis, in which social workers are not included as they do not provide direct care, reveals that care worker vacancy rates declined in all sectors over the period 2008 to 2010. By January 2010, the mean vacancy rate for care workers among private providers was 3.7 percent, which is very close to the 3.3 percent among providers in the voluntary sector and slightly higher than that in local authority providers (Table 11). The highest care workers vacancy rates at both T1 and T2 are reported among providers in 'other' sectors.

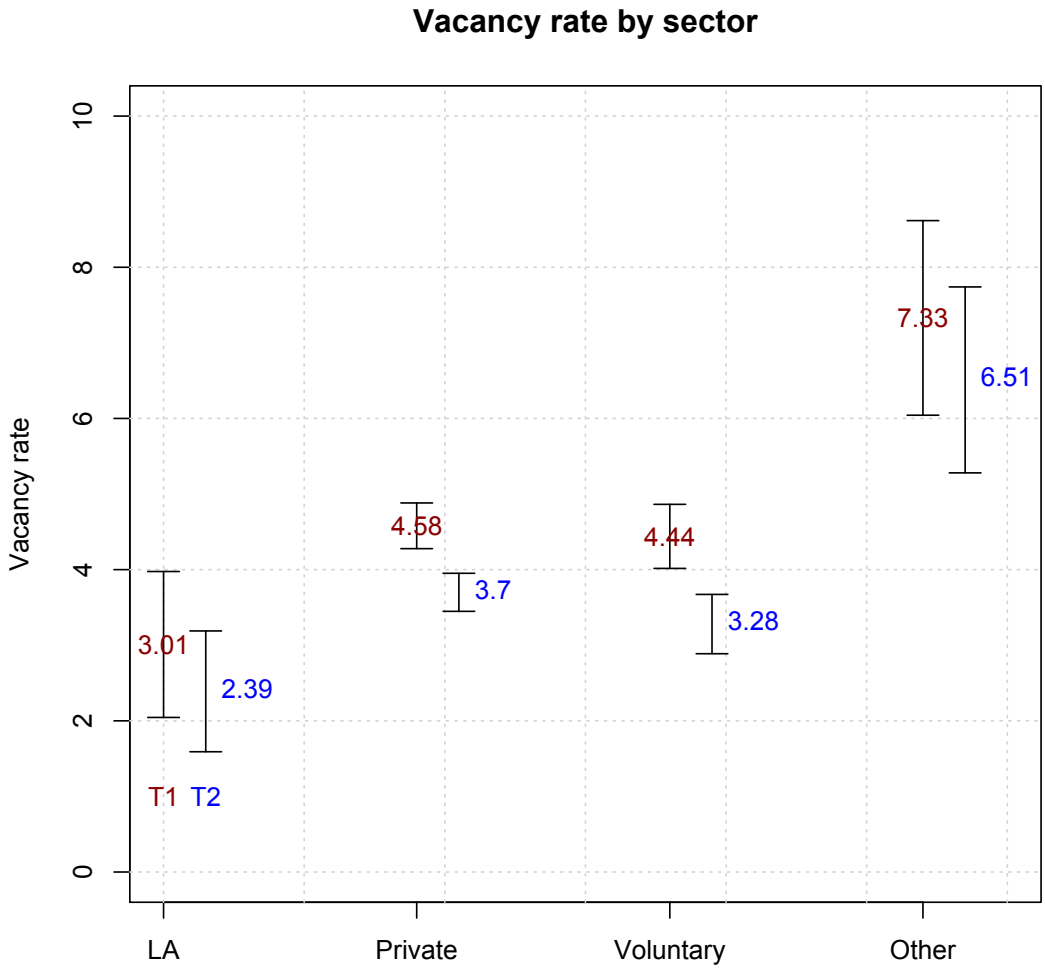
Table 11 Care worker mean vacancy rates at T1 and T2 by sector

	Number of	*Mean vacancy rate*	
Sector	*providers*	*T1*	*T2*
Public	147	3.0	2.4
Private	1850	4.6	3.7
Voluntary	783	4.4	3.3
Other	173	7.3	6.5

Figure 6 shows changes in the mean care worker vacancy rates and confidence intervals from 2008-2010. Although the mean vacancy rate was reduced by equal size (in absolute terms) for public and private organisations, the effect was only significant within the private sector[8]. Figure 6 shows that vacancy rates varied more widely among individual public providers while differences are much narrower for the private and voluntary organisations. The reductions observed in vacancy rates within individual providers were significant for those in both the private and voluntary sector, while not significant for local authority and other providers.

[8] Significant changes are indicated when confidence intervals for vacancy rates in T1 and T2 do not overlap

Figure 8 Mean and confidence intervals of care worker vacancy rate at T1 and T2 by sector



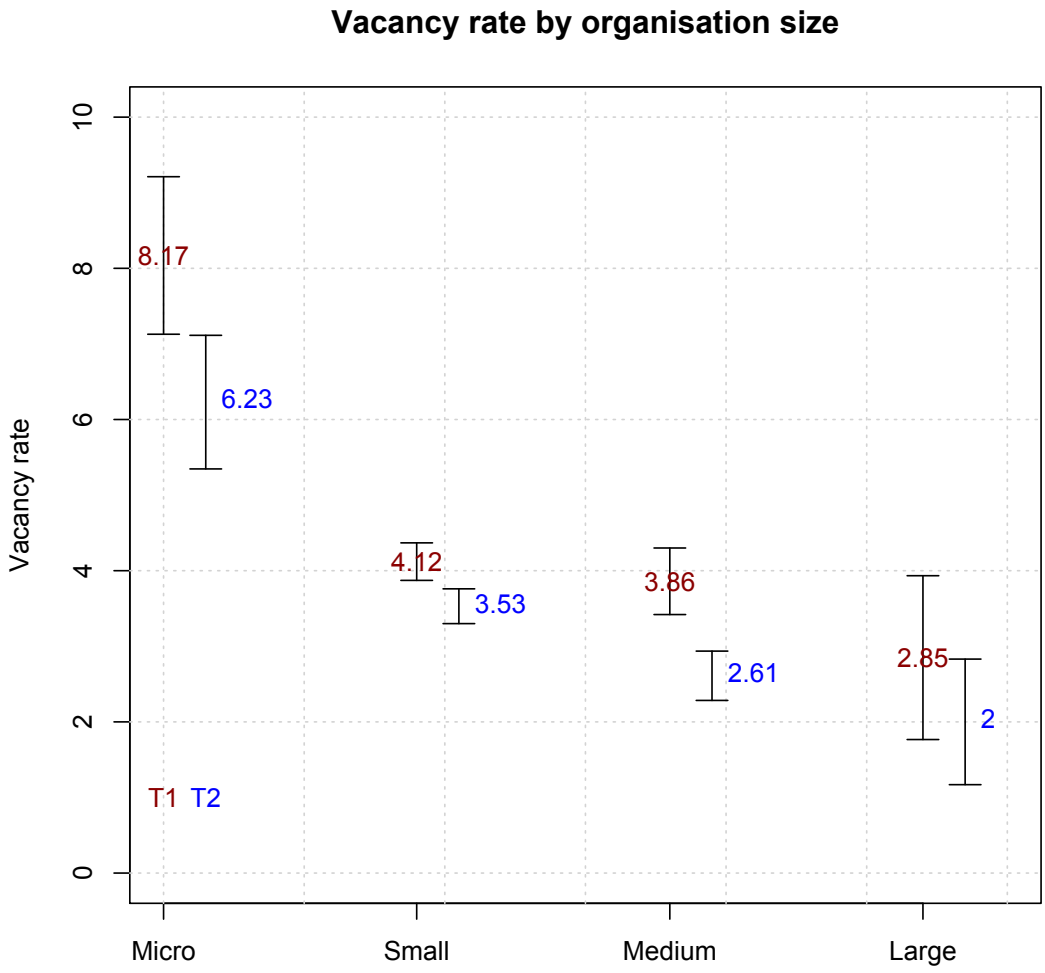
Organisation size

Table 12 shows that organisations of all sizes experienced reductions in care worker vacancy rates from T1 to T2. Care worker vacancy rates are lowest within large organisations, although reductions in vacancy rates are not significant among this group of providers (see Figure 6). Micro organisations (less than 10 staff members) experienced the largest decline in the mean vacancy rate from 8.2 percent in T1 to 6.2 percent in T2. Significant reductions were also observed among small and medium sized employers, while slight, but not significant reductions in vacancy rates were observed within large employers (200 or more workers). Figure 6 indicates that all these changes for individual employers are significant (where confidence intervals do not overlap for T1 and T2), except for large employers. However, the sample includes relatively small numbers of the latter group of employers.

Table 12 Care worker mean vacancy rates at T1 and T2 by organisation size

	T1		*T2*	
Organisation size	*Number of providers*	*Mean vacancy rate*	*Number of providers*	*Mean vacancy rate*
Micro	356	8.2	375	6.2
Small	1563	4.1	1659	3.5
Medium	467	3.9	542	2.6
Large	13	2.9	16	2

Figure 9 Mean and confidence intervals of care worker vacancy rate at T1 and T2 by organisation size



Type of setting

Vacancy rates varied considerably by type of care setting, with the lowest care worker vacancy rates being in adult day care and health services (at T2: 1% and 0.7% respectively). On the other hand, care worker vacancy rates are very high in adult domiciliary and community care settings (at T2: 5% and 6.8%

respectively). Table 13 indicates that, in terms of change, all employers within different settings experienced reductions in care worker vacancy rates. However, such reductions are only significant for adult residential providers (paired-*t*=-2.54, p=0.01).

Table 13 Care worker mean vacancy rates at T1 and T2 by type of care settings

	Care Workers' Mean Vacancy Rate		*Paired t-test*	*p-value*
Type of care setting	*T1*	*T2*		
Adult- residential	4.3	3.5	-2.54	0.011
Adult- day care	2.1	1.0	-1.15	0.251
Adult- domiciliary	6.4	5.0	-1.46	0.144
Adult- community care	7.8	6.8	-0.19	0.846
Children's	2.4	2.0	-0.30	0.765
Health	0.7	0.7	-0.01	0.990
Other	10.5	3.5	-1.20	0.253

Changes in care worker vacancy rates 2008 to 2010

Overall, care worker vacancy rates reduced from 4.6 percent at T1 to 3.9 at T2, a significant reduction of nearly 1 percent (paired-*t*= -3.85, p<0.001). However, over three quarters of providers experienced no change in care worker vacancy rates over the period of study (77.4%, n= 1,884). The mean vacancy rate among this group of providers was 2 percent at both T1 and T2. Table 14 presents these figures and Figure 7 provides a visualization of changes in vacancy rates within individual employers.

Table 14 Changes in care worker vacancy rate statistics for all panel providers and the two groups experiencing increases and decreases in care worker vacancy rates from T1 to T2

Care workers' vacancy rate statistics	*All providers included*	*Providers with increased vacancy rate*	*Providers with decreased vacancy rate*
Number of providers	2433	201	348
Mean vacancy rate at T1	4.6	5.4	18.7
Mean vacancy rate at T2	3.9	19.8	4.9
Mean change in vacancy rate for individual providers	-0.8	-14.4	13.7
95 % CI of mean change in vacancy rate- Lower bound	-1.6	-12.2	12.1
95 % CI of mean change in vacancy rate- Upper bound	-0.4	-16.6	15.3
Paired t-test of change	-3.84	-13.0	16.6
Significance (p-value)	<0.001	<0.001	<0.001

Around 14 percent of providers (348) experienced a significant reduction in their care worker vacancy rate from a mean of 18.7 percent at T1 to less than 5 percent at T2 (paired-*t*=16.6, p<0.001). Another smaller group of 201 providers (8.3%) experienced increases in their care worker vacancy rates from 5.4

percent at T1 to nearly 20 percent at T2 (paired-*t*=-13.0, p<0.001). It is clear that the reduction in the overall care worker vacancy rates is attributed to the large reduction experienced by the 348 individual providers.

Figure 10 Scatter plot of providers with negative and positive changes in care worker vacancy rate from T1 to T2

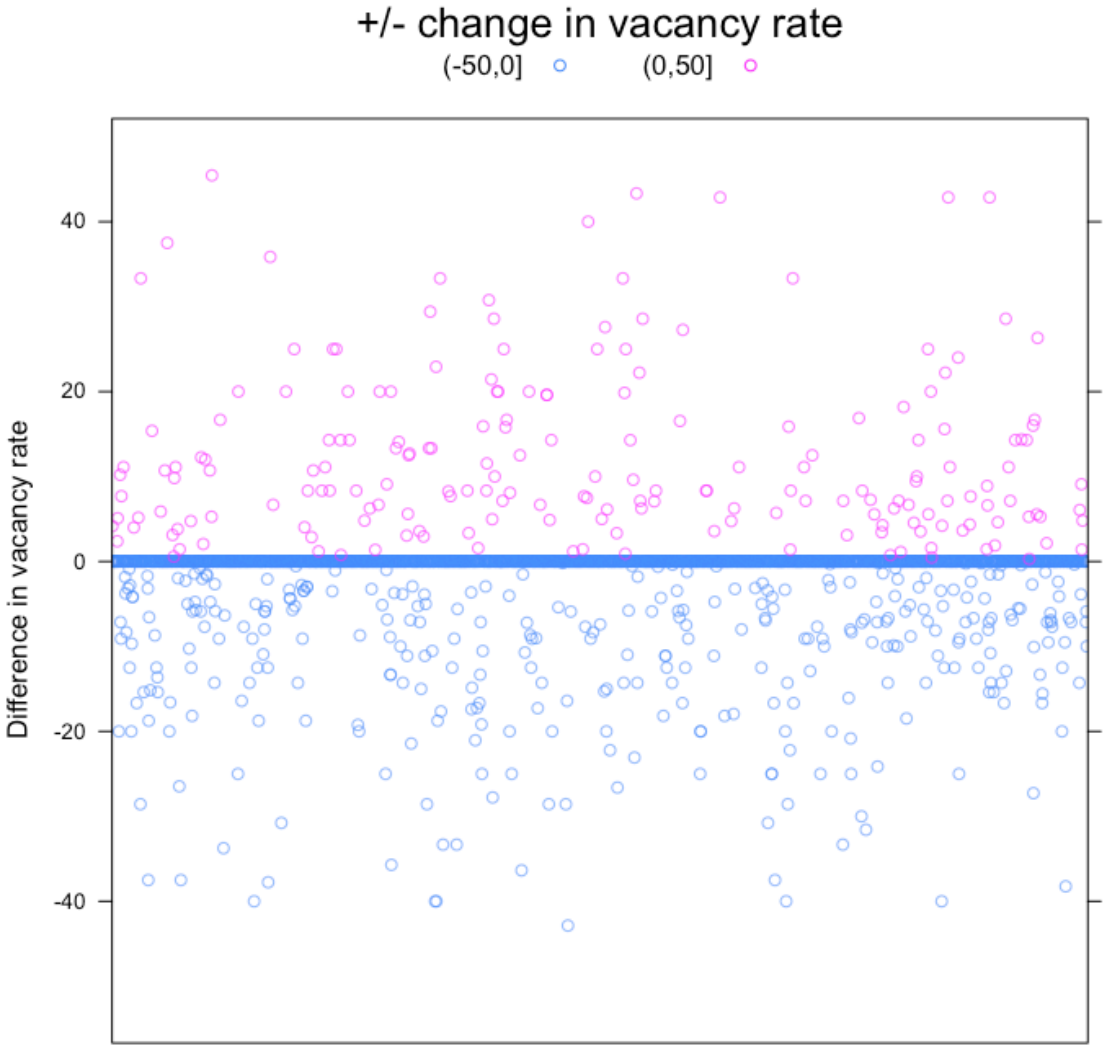


Table 15 provides an analysis of the distribution of providers in three groups: those experienced no change in care worker turnover rate over the period of study; those who expereinced increases in vacancy rates and those who experienced declines in turnover rates. This analysis examines the movement of organisations to different groups with distinct experiences of stability, increases and declines in care worker vacancy rates. Comparing these distributions does not identify the quantity of changes in vacancy rates within individual orangisations, these are examined in the previous section. The analysis indicates no significant differences in the distribution of the three groups by sector (χ^2=5.67, d.f.=6, p=0.461) or by organisation size (χ^2=9.49, d.f.=6, p=0.148). Proportionally more providers with declines in vacancy rates are located in the South East and South West regions. On the other hand, providers in London are significantly over-represented within the group of providers who experienced

increases in vacancy rates (χ^2=27.1, d.f.=16, p=0.04). No large differences are observed in the distribution of the three groups of providers by type of setting, except for an over-representation of adult residential providers within the group of providers with increased vacancy rates.

Table 15 Distributions of providers with different changes in care worker vacancy rates from January 2008 to January 2010 by key organisational characteristics

Organisational characteristics	*Providers with no change in vacancy rates*	*Providers with increased vacancy rates*	*Providers with decreased vacancy rates*
Sector			
LA	3.0%	3.1%	2.6%
Private	6.2%	6.1%	4.3%
Voluntary	67.0%	66.5%	64.1%
Other	23.8%	24.4%	29.0%
Size			
Micro	15.5%	14.9%	13.2%
Small	65.5%	67.7%	62.4%
Medium	18.6%	17.4%	23.3%
Large	0.4%	0.0%	1.2%
Region			
Eastern	8.8%	8.5%	7.8%
East Midlands	9.9%	4.5%	10.3%
London	6.7%	11.4%	6.6%
North East	3.6%	2.5%	2.3%
North West	9.6%	13.4%	7.2%
South East	27.3%	30.9%	31.3%
South West	12.7%	12.9%	14.4%
West Midlands	11.9%	10.0%	12.9%
Yorkshire & Humber	9.6%	6.0%	7.2%
Type of Setting			
Adult-residential	73.0%	78.6%	71.6%
Adult- day care	3.1%	1.0%	1.4%
Adult- domiciliary	18.4%	19.4%	23.9%
Adult- community care	1.6%	0.0%	1.2%
Children's	1.9%	0.5%	0.9%
Health	1.4%	0.5%	0.6%
Other	0.5%	0.0%	0.6%
Number of providers	1884	201	348

Changes in perceived reasons for leaving

The movement of people between jobs attracts the attention of many sociologists and economists, highlighting the interaction of time and opportunity structures in career development. Vacancy-driven models provide the background for many conceptualisations of the opportunity structure and economic segmentation and may explain, even partially, the reductions observed in vacancy rates during the period of study, which coincided with the economic recession and its uncertainty. Vacancy-chain theory (White, 1970) assumes that mobility is a function of available positions and that the emptying and filling of positions are closely related to one another (Rosenfeld, 1992). However, the longitudinal analysis indicates that while reductions in care worker vacancy rates are observed, turnover rates remained high, on average. These are strong indications that vacancy rate reductions may have been achieved on the basis of lack of other employment opportunities within the wider labour market and increases in people seeking jobs due to the economic recession. The high turnover rate implies that the terms and conditions of care work may have substantially changed, possibly with some recruitment of workers with motivations that do not fit with or suit care work, which leads to staff turnover.

The longitudinal panel allows us to investigate variations in perceived reasons of why workers leave their jobs over time from the same group of employers, thus controlling for sampling and other errors. Previous analysis of job shifting patterns within the care sector indicated that most workers tend to change jobs but remain within the sector (Hussein, 2010c). These patterns reflect greater occupational embeddedness rather than job embeddedness, meaning that workers are likely to switch employers for various reasons but often remain in the sector. However, the analysis is based on employers' perceptions rather than accurate records of employment or worker reports, further longitudinal analysis of individual workers' job mobility will allow us to examine if these perceived patterns reflect the reality.

The NMDS-SC requests employers to identify the number of staff, by different job roles, who left their employment during the 12 months preceding the completion of the NMDS-SC. Employers are then asked to provide information on both the destination of staff that left and their reasons for leaving the job. The latest data are collected at aggregate level, meaning that individual destinations and reasons cannot be identified and thus cannot be linked to specific job roles or other individual characteristics. Employers were requested to select all reasons for leaving from a list of 15 possible reasons. In an effort to examine whether some of these reasons were affected by common latent (or unmeasured) factors we used Principal Component Analysis (PCA) in a previous analysis (see Hussein 2010c). The rotated PCA showed that 10 components were needed to represent 97 percent of the variance (with a minimum of 3 components accounting for 64% of the variance). The detailed analysis showed that some of the reasons were not affected by common latent factors but others are. The following results were deduced from the PCA:

- First, both 'retirement' and 'death' are influenced by a common factor that we call 'end of working life'.
- Second, both 'personal reasons' and 'other' reasons appear to be affected by a common latent factor: 'personal'.
- Thirdly, the three reasons 'conditions of work', 'competition from other employers' and 'transfer to other employer' appear to be influenced by another latent factor: 'unfavourable organisation conditions'.
- Lastly both 'nature of work' and 'resignation' relate strongly to a fourth latent variable: 'unsuitable nature of work'.

Perceived reasons for leaving are:

1. Pay
2. End of working life (end-work-life)
3. Personal
4. Non-favourable organisation conditions (Org. Conditions)
5. Unsuitable nature of work (Work nature)
6. Career development (Career Dev.)
7. Dismissal
8. Redundancy
9. End of contract (End-Contract)
10. Reasons unknown (Unknown)[9]

Different reasons for leaving are likely to imply different patterns of job switching and can be indicative of organisation versus occupation switching. For example, unfavourable organisation conditions may result in changing employer, while the perceived unsuitable nature of work may mean a search for a different occupation. Previous analysis indicates that employers believe that 'personal reasons for leaving' are related to around a quarter of cases. This was followed by 'unknown reasons' in 18 percent of cases and unfavourable organisation conditions in 17 percent of cases. Employers cited 'pay' as an explanation in only 4 percent of cases, while 'unsuitable nature of work' was attributed to 14 percent of leavers. 'Career development' was perceived to be one of the reasons for leaving in 10 percent of cases, while both 'end of contract' and 'redundancy' were cited in one percent of cases each. Variations in reasons for leaving were observed in relation to different organisational characteristics, especially sector. For example, private sector employers cited 'pay' and 'unfavourable organisation conditions' significantly more than other providers (Hussein 2010c).

In the current longitudinal analysis we aimed to investigate how perceived reasons for leaving care jobs changed from January 2008 to January 2010. We also aimed to examine such change separately among different groups of providers who experienced different changes in care worker turnover rates over the period of study. This allowed for a better understanding of whether changes in of working conditions, pay levels and other characteristic and associations

[9] It should be noted that 'unknown reason' as provided by employers may conceal negative reasons related to the employer or that employers genuinely do not know the reasons. Similarly, 'personal reasons' may be used by employees as excuses to shield employees' own negative experience with that particular employer while retaining a good enough relationship for future references.

with positive or negative experience affected care worker turnover rates over time.

Providers with no change in care worker turnover from T1 to T2

A total of 1,165 providers among the longitudinal sample experienced no change in care worker turnover rates from January 2008 (T1) to January 2010 (T2). Collectively they reported reasons for leaving in 5,577 cases in T1 and 5,611 in T2. We are using this group of providers as a 'benchmark' to capture overall trends in perceived reasons for leaving. Table 16 shows that for organisations with no change in turnover rates, the distribution of perceived reasons for leaving remained almost unchanged from T1 to T2, with the exception of 'personal reasons' and 'reasons unknown'. The changes in these percentages are, however, very small in magnitude. Overall, the patterns reasons for leaving remained virtually the same over the period of study.

Table 16 Perceived reasons for leaving jobs among providers experiencing NO CHANGE in care worker turnover rates at T1 and T2 and significance of change

	T1		*T2*				*Sig*
Reason for leaving	*Number of cases*	*%*	*Number of cases*	*%*	*Mean paired change (CI)*	*Paired t-test*	
Pay	273	4.9	282	5.0	0.01 (-0.02, 0.03)	0.56	0.571
End-work-life	173	3.1	189	3.4	0.01 (0.0, 0.02)	2.60	0.009
Personal	1235	22.1	1350	24.1	0.10 (-0.01, 0.2)	1.74	0.082
Org. Conditions	853	15.3	840	15.0	-0.01 (-0.06, 0.04)	-0.44	0.662
Work nature	1011	18.1	936	16.7	-0.07 (-0.15, 0.01)	-1.59	0.110
Career Dev.	452	8.1	452	8.1	0.0 (-0.02, 0.02)	0.00	1.000
Dismissal	259	4.6	261	4.7	0.0 (-0.02, 0.02)	0.17	0.860
Redundancy	41	0.7	45	0.8	0.0 (0.0, 0.01)	1.07	0.285
End-Contract	41	0.7	41	0.7	0.0 (0.0, 0.0)	0.00	1.000
Unknown	1239	22.2	1215	21.7	-0.02 (-0.04, 0.0)	1.83	0.067

Providers experiencing increases in care worker turnover from T1 to T2

Overall, over a quarter of the providers' panel sample (26.7%, n=644) experienced an increase in care worker turnover rate, with a paired mean change (i.e. for individual employers over time) of 30 percent (CI: -31.8% to -26.1%). This group of providers indicated reasons for leaving in 3,676 cases in T1 and 6,544 cases in T2. Among this group of providers, Table 17 shows that the relative importance of almost all different reasons for leaving has slightly (but statistically significant) declined from T1 to T2 except for 'unknown reasons' and 'dismissals'. The only two reasons with no relative changes over time were redundancy and end of contracts. The results show that individual employers are more likely to report unknown reasons at T2 than they did at T1, while the opposite is observed for other reasons. This might be an indicator that employers in the group with higher levels of turnover rates may be intentionally selecting unknown reasons at T2 which may be because they do not collect such data or because they do not wish to report it.

Table 17 Perceived reasons for leaving jobs among providers experiencing INCREASES in care worker turnover rates at T1 and T2 and significance of change

	T1		*T2*				*Sig*
Reason for leaving	*Number of cases*	*%*	*Number of cases*	*%*	*Mean paired change (CI)*	*Paired t-test*	
Pay	122	3.3	179	2.7	-0.1 (-0.2, 0.0)	-2.16	0.031
End-work-life	178	4.8	293	4.5	-0.2 (-0.2, -0.1)	-5.24	<0.001
Personal	1009	27.5	1772	27.1	-1.2 (-1.5, -0.9)	-8.11	<0.001
Org. Conditions	701	19.1	1264	19.3	-0.9 (-1.2, -0.5)	-5.13	<0.001
Work nature	421	11.5	743	11.4	-0.5 (-0.7, -0.3)	-5.33	<0.001
Career Dev.	417	11.3	670	10.2	-0.4 (-0.5, -0.3)	-6.90	<0.001
Dismissal	202	5.5	400	6.1	0.3 (0.2, 0.3)	4.90	<0.001
Redundancy	17	0.5	47	0.7	0.0 (-0.1, 0.0)	-1.80	0.770
End-Contract	33	0.9	55	0.8	0.0 (-0.1, 0.0)	-1.92	0.056
Unknown	576	15.7	1121	17.1	0.9 (0.5, 1.2)	5.08	<0.001

Providers experiencing decline in care worker turnover from T1 to T2

The longitudinal analysis indicates that another quarter of providers (25.1%, n=606) experienced an improvement (decline) in their care worker turnover rate from March 2008 to October 2009. The mean reduction of turnover rate per provider is significant at 26.3% (CI: 23.5% to 29.2%; paired-*t*=18; p<0.001). This group of 606 providers reported staff reasons for leaving in 5,785 cases at T1 and 4,698 cases at T2. Table 18 shows that distribution of different reasons for leaving at T1 and T2 revealing they were very similar in T1 and T2. Very slight changes occurred among the reasons cited by individual employers over the period January 2008 to January 2010. For example, the importance of pay as a reason for leaving was significantly reduced by 0.2 percentage points from T1 to T2 within individual employers in this group (paired-*t*= -3.73, p<0.001). Other significant but small changes in magnitude are: an increase in the relative importance of personal reasons (mean paired change= 0.3%; paired-*t*=2.71; p=0.007); a decline in the importance of 'nature of work' (mean paired change= 0.3%; paired-*t*=-3.28; p=0.001) and a decline in 'unknown reasons' (mean paired change= -0.4%; paired-*t*=-2.22; p=0.027).

Although the changes in relative importance of different reasons for leaving are very small, they suggest that some improvement may be occurring in terms of perceptions of pay and attracting the right people who recognise the nature of the work involved in social care (reduction in unfavourable nature of work) among this group with slower care worker turnover rates.

Table 18 Perceived reasons for leaving jobs among providers experiencing DECLINE in care worker turnover rates at T1 and T2 and significance of change

	T1		*T2*				*Sig*
Reason for leaving	*Number of cases*	*%*	*Number of cases*	*%*	*Mean paired change (CI)*	*Paired t-test*	
Pay	434	7.5	331	7.1	-0.2 (-0.3, -0.1)	-3.73	<0.001
End-work-life	247	4.3	192	4.1	-0.1 (-0.2, 0.0)	-2.54	0.011
Personal	1374	23.8	1171	24.9	0.3 (0.1, 0.6)	2.71	0.007
Org. Conditions	1072	18.5	904	19.2	0.3 (0.1, 0.5)	2.45	0.014
Work nature	921	15.9	726	15.5	-0.3 (-0.5, -0.1)	-3.28	0.001
Career Dev.	531	9.2	450	9.6	0.1 (0.0, 0.3)	2.08	0.038
Dismissal	287	5.0	245	5.2	0.1 (0.0, 0.1)	1.82	0.069
Redundancy	36	0.6	21	0.5	0.0 (0.0, 0.1)	1.29	0.197
End-Contract	40	0.7	25	0.5	0.0 (-8.3, 0.1)	1.96	0.051
Unknown	843	14.6	633	13.5	-0.4 (-0.7, 0.0)	-2.22	0.027

Discussion and Conclusion

At a time of increasing attention to the long term care workforce, both as a growing sector of employment and in meeting increased demands due to population and demographic changes, it is important to make the most of existing information to understand this workforce. The National Minimum Data Set for Social Care (NMDS-SC) provides rich information on this workforce at different points of times. Additionally, it provides a platform to construct longitudinal designs and methodologies to estimate workforce stability and dynamics accurately.

Financing long-term care is a major policy concern (Dilnot Commission 2011) and it is workforce costs that form an estimated 80 to 85 percent of the costs (Curtis 2010). Previous analyses have shown that job stability differs by job roles (Hussein 2009); thus it is important to focus analysis on one group of workers rather than seeing the sector's workforce as homogeneous. Care workers are the backbone of this workforce (around 70 percent of the workforce) but high vacancy and turnover rates among this group are both very costly and affect the quality of care received by service users. Estimating accurate changes in the stability of work for this group is very important within this context if we are to improve continuity and to know that this has been achieved. Using 18 NMDS-SC datasets we were able to construct a longitudinal sample of providers to estimate changes over the period from 2008-2010; further data points will be investigated in due course. A longitudinal sample of nearly 3000 providers, that is satisfactorily representative of the whole NMDS-SC sample, allowed us to investigate changes in care worker turnover and vacancy rates and perceived reasons for leaving the sector from 2008-2010. We were also able to examine changes within individual employers with specific characteristics over time resulting in a high degree of confidence in establishing associations.

The longitudinal analyses presented in this report highlight a number of important findings. The period of 2008-2010 saw considerable economic and policy changes that influenced and continue to influence care workforce stability and possibly quality of care. Overall during the period from January 2008 to January 2010, the mean turnover rate of care workers remained unchanged, while vacancy rates significantly declined. These results mirror the economic situation during this period (which is still continuing) with higher levels of unemployment and difficulties in finding jobs (ONS 2010). While care workers vacancy rates dropped, indicating an increase in staff, turnover rates remained considerably higher than average vacancy rates in the UK (ONS 2011). These findings raise questions around the quality and suitability of new recruits and methods of reducing specific vacancy rates, which other types of research will need to address.

The analysis highlights great variability in the stability of the care workforce by different organisational characteristics, especially sector and type of sector. Turnover rates are remaining high within the private sector and among

residential and domiciliary providers. On the other hand, they remain low in the public sector and in community care services. During the period (+/- 3 months) from January 2008 to January 2010, mean care workers turnover rates remained unchanged, despite the recession. Just over half of providers in the data used for this study experienced no change in care worker turnover rates. It is evident that nearly a quarter saw significant reductions in turnover rates but another quarter experienced significant increases.

Variations in the distribution of providers with different experience of changes in care worker turnover rates emerged. Some significant regional differences were noted, with London providers being significantly under-represented in the group of providers with improved turnover rates, and proportionally more providers in East and West Midlands and South West being within the group of providers with improved turnover rates. In terms of type of service settings, adult residential providers (care homes in the main) were significantly over-represented within the group of providers with improved care worker turnover, while the opposite was true for adult domiciliary (home care) providers.

During the same period of time, 2008-2010, while turnover rates remained constant, on average, vacancy rates significantly reduced by an average of one percent. The longitudinal analysis shows that the mean care worker vacancy rate declined from 4.6 percent in T1 to 3.9 percent in T2. However, care worker vacancy rates are still considerably higher than the overall official statistics estimating overall vacancy rates in the UK labour market at just 1.7 percent in June to August 2011. We aim to continue the investigations of changes in the stability of the care workforce by identifying a further data point to cover an additional 18 months of change (up to mid 2011). The findings related to stable turnover rates and declining vacancy rates indicate the increased ability of the care sector to attract more people, due to high levels of unemployment, but that some parts of this sector are failing to retain such staff. Vacancy rates are lowest in the public sector, but it should be recalled that these figures focus only on care workers and not professionals where there may different levels of vacancies. Care workers' vacancy rates declined most significantly within private and voluntary organisations and in small to medium organisations. The only significant reductions in vacancy rates in terms of type of settings took place in adult residential services, such as care homes.

The longitudinal analysis indicates that overall employers' perceived reasons for workers to leave their jobs remained almost unchanged over time with few exceptions. Among providers with higher turnover rates at T2 employers reported a significant increase in reported dismissals and unknown reasons. Such findings may be linked to attempts to attract workers who may not possess the required skills/aptitude or who have a different set of motivations than the norm to keep vacancy rates low. Another difference emerges among providers where there was a decline (improvement) in turnover rates at T2. For this group of employers the percentages of cases reported as leaving due to poor pay, retirement (end of working life) and 'unsuitability of nature of work' were significantly less at T2 than T1. This indicates that this group of employers succeeded in both reducing care worker turnover rates, and attracting and

retaining workers who are more likely to be suitable for care work. The decline in retirement may mean that either people were choosing to work longer or that the age profile of the staff team was different. It would be necessary to undertake further investigations before being able to see if these were explanatory factors.

The policy value of these findings is evident at a number of levels. First, social care policy could point to the success of this area in turning round or beginning to halt the severe workforce shortages of the sector and to slow down the pace of turnover. Instead of concentrating on recruitment and retention as endemic to the sector there may be room to acknowledge that some employers have experienced improvements in their vacancy rates and turnover rates. Policy makers might wish to place greater emphasis on differentiating between providers. There may be room for regional rather than national initiatives; especially in the London region and its surroundings. Policy makers may wish to support regulatory bodies to examine vacancy rates and turnover rates in line with these national findings to ensure that they are paying attention to workforce turnover as both a sign of possible poor recruitment and to ensure that proper induction and support for new staff are a reality.

The sector itself may find these findings encouraging but again will need to respond to the variations that have emerged. At a time of personalisation and increased emphasis on care at home, it is worthwhile examining why it is that care homes appear to have greater stability of staff and fewer vacancies than home care agencies. Possibly some workers may wish to combine care home and home care work and this might be explored to see if this leads to staff satisfaction, and to good outcomes for service users.

For staff and their representatives the analysis shows that there are clearly some social care providers with fairly settled staff groups with all the benefits that this may incur in terms of support and continuity. It would be useful to identify the relative contributions of managers and human resource staff to any such changes and to explore the ways in which organisational cultures can be changed or fostered. Staff working for providers with high turnover and vacancy rates may find this stressful and reward packages may not fully recognise this. There would be value perhaps in local commissioners, other partner agencies, and improvement and staff support agencies tailoring support to such providers, for example, by community NHS teams working to support such staff in an explicit and focused way. The data here indicate that such developments may be possible as it is only some providers rather than them all who may be experiencing staffing problems.

For people using social care services and their families the data in this study and our analysis suggest that it is possible to differentiate between providers in the sector and to use such information in decision making when purchasing care services. This study enables the social care sector to challenge stereotypes that it is not attractive to staff and this may reassure potential users and carers. There is need for a more nuanced debate about the workforce in many settings. The next stage of this unique analysis will be the adding of a new data point to examine changes up to mid 2011. Further specific longitudinal analysis of

individual workers records will thus enable us to examine job mobility and stability by tracing the movement of individual workers and identify whether many are leaving the social care sector altogether or are moving employers. The sector now possesses data about its most substantial asset, its staff, which is possible to examine at a new level of sophistication. The data sets will become more valuable as time progresses and more employers complete all parts of the surveys. As researchers we are grateful to them for providing such valuable data and enabling this level of analysis.

References

Castle, N, and Engberg, J. (2005) Staff turnover and quality of care in nursing homes. *Medical Care,* 43(6): 616-626.

Castle, N. and Engberg, J. (2006) Organizational characteristics associated with staff turnover in nursing homes. *The Gerontologist*, 46(1): 62-73.

CIPD (2009) *Recruitment, retention and turnover*. Chartered Institute of Personnel and Development: London.

Community Care (2011) Social worker vacancy rates down across Britain. 20th September 2011. Accessed online 4th October 2011. http://www.communitycare.co.uk/Articles/20/09/2011/117476/social-worker-vacancy-rates-down-across-britain.htm

Curtis, L. (2010) *Unit costs of health and social care*. PSSRU: Kent.

Department of Health (2001) "*Press release 2001/0486: Government launches first ever social worker recruitment drive*." London: Department of Health.

Department of Health (2004) *The Social Care Workforce: Developing a New National Agenda: Report of a Conference Held on 26/27 May 2004*. London, Department of Health: 73.

Department of Health (2007) *Collaborative Recruitment Solutions in Social Care - getting and keeping your workforce*. London, Department of Health: 46.

Department of Health (2009) *Working to Put People First: the strategy for the adult social care workforce in England.* London, Department of Health.

Department of Health (2010) *A vision for adult social care*. London, Department of Health.

Dilnot Commission (2011) *Fairer Care Funding*, *the report of the commission on funding of care and support*. Crown Office: London

Donoghue, C. (2009) Nursing Home Staff Turnover and Retention: An analysis of national level data. *Journal of Applied Gerontology*, 29(1): 89-106.

Hussein, S, and Manthorpe, J. (2005) An International Review of Long Term Care Workforce: Policies and Shortages. *Journal of Aging and Social Policy*, 17 (4): 75-94.

Hussein, S. (2010a) Pay in the adult social care in England. *Social Care Workforce Periodical*, Issue 6- May 2010; web published. Accessed online 15th September 2011. http://www.kcl.ac.uk/sspp/kpi/scwru/pubs/periodical/issues/scwp6.pdf

Hussein, S. (2010b) Modelling pay in adult care using linear mixed-effects models. *Social Care Workforce Periodical*, Issue 7- June 2010; web published. Accessed online 20th September 2011. http://www.kcl.ac.uk/sspp/kpi/scwru/pubs/periodical/issues/scwp7.pdf

Hussein, S. (2010c) Reported reasons for job shifting in the English care sector. *Social Care Workforce Periodical*, Issue 8- August 2010; web published. Accessed online 2nd October 2011. http://www.kcl.ac.uk/sspp/kpi/scwru/pubs/periodical/issues/scwp8.pdf

Learning and Skills Council (2006) *National Employers Skills Survey 2005: Main Report.* Coventry, Learning and Skills Council. http://research.lsc.gov.uk/LSC+Research/published/ness/

Low Pay Commission (2011) *National Minimum Wage*, Low Pay Commission Report 2011. The Stationery Office: London.

National Care Forum (NCF) (2011) Personnel Statistics 2011, A survey of NCF member organisations. Accessed online 30th September 2011. http://www.nationalcareforum.org.uk/content/NCF%20Personnel%20Survey%202011.pdf

Office of National Statistics (ONS) (2010) Impact of the recession. ONS: London.

Office of National Statistics (ONS) (2011) Labour market statistics: September 2011. ONS: London.

Parsons, S.K., Simmons, W.P., Penn, K. & Furlough, M. (2003) Determinants of satisfaction and turnover among nursing assistants: The results of a state wide survey. *Journal of Gerontological Nursing*, 29, 51–58.

Roche, D. and Rankin, J. (2004) *Who Cares? Building the social care workforce*. London, Institute for Public Policy Research: 25.

Rubery, J., Hebson, G., Grimshaw, D., Carroll, M., Smith, L., Marchington, L. & Ugarte, S. (2011) *The Recruitment and Retention of a Care Workforce for Older People*, Manchester: University of Manchester.

Simon, A., Owen, C., Moss, C., Petrie, P., Cameron, C., Potts, P., and Wigfall, V. (2007) Working Together Volume 1. *Secondary Analysis of the Labour Force Survey to Map the Numbers and Characteristics of the Occupations working within Social Care, Childcare, Nursing and Education*. London: Thomas Coram Research Unit.

Skills for Care (2010) *The state of the adult social care workforce in England*. Skills for Care: Leeds.

The National Care Forum (NCF) (2011) *A survey of NCF member organisation*. Personnel Statistics 2011, NCF: Coventry.

TNS (2007) *National survey of care workers*. Final report. TNS for Skills for Care.

White, H. (1970) Matching, vacancies and mobility. *Journal of Political Economy*, 78(1): 97-105.